Dr. N.G.P. ARTS AND SCIENCE COLLEGE

REGULATIONS 2024-25 for Post Graduate Programme
(Outcome Based Education model with Choice Based Credit System)

M.Sc., Hospital Administration
(For the students admitted during the academic year 2024-25 and onwards)

Programme: M.Sc., Hospital Administration

Eligibility

Candidates for admission to the first year of the M.Sc., Hospital Administration full time degree course shall be required to possess a pass in "Bachelor's Degree" of any University and as per the norms set by the Government of Tamil Nadu or an Examination accepted as equivalent hereto by the Academic Council, subject to such conditions as may be described there to are permitted to appear and qualify for the M.Sc., Hospital Administration Post Graduate Degree Examination of this College after a course of study of two academic years.

Programme Educational Objectives

The Curriculum is designed to attain the following learning goals which students shall accomplish by the time of their graduation:

1. To learn efficient methods of Hospital Administration

2. To understand the concepts of management with relation to modern hospitals

3. To prepare and train qualified and efficient administrators to manage hospitals

4. To prepare and understand the principles of management and apply, when providing Quality patient Care in selected areas of Clinical Specialty in the Hospital and Community

5. To offer platform for working professionals in hospitals to achieve desired knowledge, skills and attitude in the field of hospital administration and enhance culture of professionalism in their approach.

6. To improve the ability of hospital based professionals in ethical decision making and implementation in key result areas of Hospital Administration.

PROGRAMME OUTCOMES:

On the successful completion of the program, the following are the expected outcomes.

PO Number	PO Statement
PO1	To understand the major concepts in the functional areas of accounting, marketing, finance, information technology, and management with relation to hospitals.
PO2	To build skills in the use of managerial tools of planning, organizing, and achieve optimal resource utilization in hospital settings.
PO3	Use oral and written communication skills to meet the needs of various audiences.
PO4	Use team, and organizational skills, supervision, and coaching techniques to effectively lead across organization, department, and work group units to meet diverse stakeholder and organizational goals in a variety of healthcare environments.
PO5	Develop innovative solutions to strategic, tactical and operational issues in managing healthcare systems and associated information technology through the combined use of information, data analytics, organizational knowledge, talent management, and critical and design thinking.

M.Sc. HOSPITALADMINISTRATION

Credit Distribution

Subjects	No.of Papers	Credit	Semester No.
Core	14	56	I to III
Elective	3	3 x 4 =12	I to III
EDC	1	1 x 3 =3	III
Computer practical	1	1 x 2 = 2	I
Hospital Internship	3	3 x 3 = 9	I to III
Hospital Training	1	1 x 2 = 2	III
Project work	1	1 x 8 = 8	IV
Total	24	92	

PG CURRICULUM
M.Sc. HOSPITAL ADMINISTRATION
AY 24-25

Course Code	Course Category	Course Name	L	T	P	Instruction Hours Week	Instruction Hours Total	Exam (h)	Max Marks CIA	Max Marks ESE	Max Marks Total	Credits
First Semester												
24HAP1CA	Core - I	Management and Organisational Behaviour	4	1	-	5	60	3	25	75	100	4
24HAP1CB	Core - II	Concept of Health and Epidemiology	4	-	-	4	48	3	25	75	100	4
24HAP1CC	Core - III	Hospital Non-Clinical Operations Management	4	-	-	4	48	3	25	75	100	4
24HAP1CD	Core - IV	Hospital Clinical Operations Management	4	-	-	4	48	3	25	75	100	4
24HAP1CE	Core - V	Biostatistics and Operations Research	4	1	-	5	60	3	25	75	100	4
24HAP1CP	Core Practical	Spreadsheet Management	-	-	4	4	48	3	40	60	100	2
24HAP1CT	Hospital Internship-I	Hospital Supportive Services	-	-	-	-	-	3	40	60	100	3
24HAP1DA	DSE - I	Total Quality Management-Tools and Techniques	4	-	-	4	48	3	25	75	100	4
24HAP1DB		Entrepreneurship										
24HAP1DC		Technology in Healthcare										
Total			24	2	4	30	360				800	29

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Course Code	Course Category	Course Name	L	T	P	Instruction Hours		Exam (h)	Max Marks			Credits
						Week	Total		CIA	ESE	Total	
Second Semester												
24HAP2CA	Core - VI	Hospital Architecture Design and Planning	4	1	-	5	60	3	25	75	100	4
24HAP2CB	Core - VII	Healthcare Economics	4	-	-	4	48	3	25	75	100	4
24HAP2CC	Core - VIII	Human Resource Management and Industrial Relations	4	1	-	5	60	3	25	75	100	4
24HAP2CD	Core - IX	Materials Management	4	-	-	4	48	3	25	75	100	4
24HAP2CE	Core - X	Healthcare Marketing and Strategic Management	4	1	-	5	60	3	25	75	100	3
24HAP2CT	Hospital Internship II	Hospital Clinical Services	-	-	3	3	36	3	40	60	100	3
24HAP2DA	DSE - II	Application of Quality in Healthcare	4	-	-	4	48	3	25	75	100	4
24HAP2DB		Innovation in Entrepreneurship										
24HAP2DC		Healthcare Data Management										
		Total	24	3	3	30	360				700	26

BoS Chairman/HoD
Department of Hospital Administration
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Course Code	Course Category	Course Name	L	T	P	Instruction Hours		Exam (h)	Max Marks			Credits
						Week	Total		CIA	ESE	Total	
Third Semester												
24HAP3CA	Core - XI	Quality Assurance in Healthcare	4	1	-	5	60	3	25	75	100	4
24HAP3CB	Core - XII	Healthcare Laws	4	-	-	4	48	3	25	75	100	4
24HAP3CC	Core - XIII	Hospital Information System	4	-	-	4	48	3	25	75	100	4
24COP3EA	EDC	Financial and Management Accounting	4	1	-	5	60	3	25	75	100	4
24HAP3CD	Core - XIV	Research Methods for Management	4	1	-	5	60	3	25	75	100	4
24HAP3CV	Hospital Internship- III	Minor Project	-	-	3	3	36	3	40	60	100	3
24HAP3DA	DSE - III	Quality Accreditations in Healthcare	4	-	-	4	48	3	25	75	100	4
24HAP3DB		Healthcare Entrepreneurship										
24HAP3DC		Data Visualization										
24HAP3CT	Hospital Training	Hospital Training (30 days) India or Abroad	-	-	-	-	-	3	40	60	100	2
		Total	24	3	3	30	360	-	-	-	800	29

Course Code	Course Category	Course Name	L	T	P	Instruction Hours		Exam (h)	Max Marks			Credits
						Week	Total		CIA	ESE	Total	
Fourth Semester												
24HAP4CV	Project Work	Project Work and Viva-voce	-	-	16	-	-	3	80	120	200	8
		Total	-	-	16	-	-	3	80	120	200	8
												92

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DISCIPLINE SPECIFIC ELECTIVE

Students shall select the desired course of their choice in the listed elective course during Semesters I, II, III

Semester I (Elective I)

List of Elective Courses

S. No.	Course Code	Course Name
1	24HAP1DA	Total Quality Management-Tools and Techniques
2	24HAP1DB	Entrepreneurship
3	24HAP1DC	Technology in Healthcare

Semester II (Elective II)

List of Elective Courses

S. No.	Course Code	Course Name
1	24HAP2DA	Application of Quality in Healthcare
2	24HAP2DB	Innovation in Entrepreneurship
3	24HAP2DC	Healthcare Data Management

Semester III (Elective III)

List of Elective Courses

S. No.	Course Code	Course Name
1	24HAP3DA	Quality Accreditations in Healthcare
2	24HAP3DB	Healthcare Entrepreneurship
3	24HAP3DC	Data Visualization

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EXTRA CREDIT COURSES

The following are the courses offered under self study to earn extra credits:

S. No.	Course Code	Course Name
1	24HAPSSA	Innovation, IPR and Entrepreneurship
2	24HAPSSB	Brand Management
3	24HAPSSC	Hospital Hazards Management

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Semester - I
CORE 1: MANAGEMENT AND ORGANISATIONAL BEHAVIOUR

Semester	Course Code	Course Name	Category	L	T	P	Credits
I	24HAP1CA	MANAGEMENT AND ORGANISATIONAL BEHAVIOUR	CORE	60	-	-	4

Preamble	This course has been designed for students to learn and understand • a basic framework to apply management theories and organizational behavior techniques in various types of healthcare organizations • the interpersonal and communication skills to be an effective leader • conceptual and technical frameworks of leadership and the role of managers
Prerequisite	Knowledge about Organisation

Course Outcomes (COs)

CO Number	Course Outcomes (COs) Statement	Bloom's Taxonomy Knowledge Level
CO1	Understand fundamental concepts of management	K3
CO2	Apply organizational planning systems and Decision making in health care	K3
CO3	Analyze functions of management, evaluate and develop organizational skills in health care management	K5
CO4	Analyze the principles of organizational behaviour dimensions in healthcare management	K5
CO5	Assess the effectiveness of healthcare administration skills using concepts of organizational climate	K5

Mapping with Program Outcomes:

COs / POs	PO1	PO2	PO3	PO4	PO5
CO1	✓	✓	✓	✓	
CO2		✓		✓	✓
CO3	✓			✓	✓
CO4			✓	✓	
CO5		✓			✓

24HAP1CA CORE : MANAGEMENT AND ORGANISATIONAL BEHAVIOUR

Syllabus

Unit	Content	Hours	E-Contents / Resources
I	**Introduction to Management** Evolution of Management science: Definition- nature- principle and process of management - management as science or art – management as profession – Managerial Roles –Management Theories : Classical- Behavioral- Modern theory - Industry 4.0 and beyond	12	Text Book
II	**Planning and Organising** Planning: Basics of planning- steps- types of plans – Strategic Management process. Organization: Meaning and definition - organization structure - delegation of authority- Decision making- Centralization - Decentralization.	12	Reference Book 2
III	**Directing and Controlling** Staffing: Man power planning and resourcing - Direction: Principles- Motivation techniques - Hierarchy of needs theory – McClelland's theory – ERG theory – McGregor's Theory X and Theory Y - Control: process- quality- control techniques	12	Text Book
IV	**Organisational Behaviour** Definition- Key elements - Need - Scope of Organisational Behaviour - models – Personality- Perception – Learning and Behaviour - Group dynamics- Leadership – Leader Vs Manager- styles- Theories	12	NPTEL
V	**Organisational Dynamics** Organisational Climate – Power and Politics- Conflict- Organisational change - Resistance to change- Management of change- Organisational development - Organisational Communication- Principles- Channels- Barriers.	12	You Tube Videos
	Total	**60**	

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Text Book	1.	Ramasamy.T. 2013. Principles of Management. Himalaya Publishing Hose, Mumbai.
Reference Books	1.	L.M.Prasad. Edition 2014. Organisational Behaviour. Sultan and Chand sons, Delhi. Reprinted 2004
	2.	Prasad.L.M. 2016. Principles and practice of Management. Sultan Chand and sons, New Delhi. (Ninth Edition).
	3.	Stephen.P.Robbins. 14th Edition. 2011. Organisational behaviour. PHI Publishers, New Delhi
	4.	David H. Holt. 1993. Management: principles and practices, Prentice Hall PTR, United States.

Journal and Magazines	https://www.gurukpo.com/principles-and-practices-of-management/
E-Resources and Website	https://www.du.ac.in/uploads/new-web/29122022_Appendix-122.pdf

Learning Method	Chalk and Talk/Assignment/Seminar

Focus of the Course	Skill Development/Entrepreneurial Development/Employability

Semester - I
CORE 2: CONCEPT OF HEALTH AND EPIDEMIOLOGY

Semester	Course Code	Course Name	Category	L	T	P	Credits
I	24HAP1CB	CONCEPT OF HEALTH AND EPIDEMIOLOGY	CORE	48	-	-	4

Preamble	This course has been designed for students to learn and understand
	• implications of personal and societal behavior on disease
	• the broad view of epidemiological principles of disease
	• the general aspects of health programmes
Prerequisite	Basic knowledge about Health

Course Outcomes (COs)

CO Number	Course Outcomes (COs) Statement	Bloom's Taxonomy Knowledge Level
CO1	Understand about concept of health, different types of disease causation, and demonstrate knowledge	K4
CO2	Understand the knowledge on basic anatomy, physiology and different functions of human body	K4
CO3	Understand various epidemiological principles and strategic models in conducting field studies	K5
CO4	Understand various aspects related to Infection control and Isolation	K4
CO5	Understand various health programmes in India and criticize their current progress on public health	K4

Mapping with Program Outcomes:

COs / POs	PO1	PO2	PO3	PO4	PO5
CO1	✓	✓			
CO2	✓				
CO3		✓		✓	✓
CO4		✓			
CO5	✓	✓			✓

24HAP1CB CORE : CONCEPT OF HEALTH AND EPIDEMIOLOGY

Syllabus

Unit	Content	Hours	E-Contents / Resources
I	**Concept of Health and Diseases** Concept of health - Definition and dimensions of health - Spectrum of Health - Determinants of Health- Indicators of health- Concept of disease - Causation of Disease - Natural History of Disease - Disease classification - Concept of disease control - Concept of prevention.	8	Text Book
II	**Basic Anatomy and Physiology & Human System** Introduction -The Cell - The tissues - Organs and Systems - Skeletal system, Blood and Blood Components - Cardiovascular System – Excretory System – Respiratory System – Digestive System – Central Nervous System – Reproductive System	10	Reference Book 1
III	**Epidemiology** Definition and basic concepts of epidemiology- Basic measurement of disease frequency - Mortality and Morbidity - Infectious disease epidemiology - Epidemic outbreak Investigation	12	Text Book
IV	**Infection Control** Nosocomial infection- Asepsis- Reservoir- Carrier and mode of transmission of communicable diseases - Infection control measures - Host Defense - Immune response - Immunization agents - Hazards of Immunization - Disease Prevention and Control- Non communicable Disease- Barrier nursing- Isolation	9	NPTEL
V	**National and International Health Programmes** Indian Health Policy - National Family welfare Programmes – Universal Immunization programme – Reproductive and Child Health	9	You Tube Videos

Programme – National Tuberculosis Control Programme – National Leprosy Eradication Programme – National AIDS Control programme – National Cancer Control Programme – National Mental Health Programme – National Diabetic Control Programme-International Health Programmes- Rockfeller Foundation- Ford Foundation – World Bank Programme		
Total	**48**	

Text Book	1.	K. Park. 2007. Preventive and Social Medicine, 19th edition. M/S Banarsidas Bhanot Publishers
Reference Books	1.	N.Murugesh. 1999. Basic Anatomy and Physiology, 5th edition. Sathya Publishers, Madurai
	2.	S.L. Goel. 2004. Healthcare Organization and structure. Deep and Deep Publications Pvt. Ltd, New Delhi
	3.	Ross and Wilson. 2006. Anatomy and Physiology in Health and illness, 19th edition. Churchill livingstore Elsevier
	4.	F.Douglas Scutchfield, C.William Keck, 2009. Public Health Practice . Cengage Learning India Private Limited, New Delhi.

Journal and Magazines	http://aiihph.gov.in/department-of-preventive-and-social-medicine/
E-Resources and Website	https://milonm28.files.wordpress.com/2017/08/parks-preventive-social-medicine-23rd-ed.pdf

Learning Method	Chalk and Talk/Assignment/Seminar

Focus of the Course	Skill Development/Employability

Semester - I
CORE 2: HOSPITAL NON- CLINICAL OPERATIONS MANAGEMENT

Semester	Course Code	Course Name	Category	L	T	P	Credits
I	24HAP1CC	HOSPITAL NON- CLINICAL OPERATIONS MANAGEMENT	CORE	48	-	-	4

Preamble	This course has been designed for students to learn and understand - the important functions of management in Hospitals - the Health Administration in India and Health Agencies - the designing and maintenance of Hospital Supportive Services
Prerequisite	Basic knowledge about Supporting service in Hospitals

Course Outcomes (COs)

CO Number	Course Outcomes (COs) Statement	Bloom's Taxonomy Knowledge Level
CO1	Understand, Compare and analyze the changing role of hospitals.	K4
CO2	Understand compare and analyze the various levels of Indian healthcare system	K4
CO3	Learn the different types of functions performed in the patient related supportive areas of the Hospital.	K5
CO4	Learn the different types of services performed in the other Supportive areas of the Hospital	K4
CO5	Understand and analyze the various crisis and its management in health care management	K4

Mapping with Program Outcomes:

COs / POs	PO1	PO2	PO3	PO4	PO5
CO1	✓	✓			
CO2	✓	✓			
CO3		✓		✓	
CO4	✓	✓			
CO5		✓	✓	✓	✓

24HAP1CC CORE : HOSPITAL NON- CLINICAL OPERATIONS MANAGEMENT

Syllabus

Unit	Content	Hours	E-Contents / Resources
I	**Introduction to Hospital** Meaning of hospital - Classification of Hospital - Functions of hospital - Modern Hospital – Hospital Organization and Structure –Hospital administration as a career - Changing system of hospital services.	10	Text Book
II	**Administrative Services** Human resources - Marketing - Patient Relations - Medical Value Tourism - Finance - Information Technology - Purchase - Stores	9	Reference Book 1
III	**Supportive Services** Front Office - Housekeeping - Linen & Laundry - Transport - Security - Medical Records - Patient Counseling - Health Insurance - Biomedical waste management	9	Text Book
IV	**Utility Services** Engineering – Civil, Electrical, Plumbing - Bio-Medical - Medical Gas supply – HVAC System – Communication system	10	NPTEL
V	**Crisis Management** Fire safety – Disaster Risks – Mock drills - Maintenance - Safety - Hazard Identification and Risk Assessment	10	You Tube Videos
	Total	48	

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Text Book	1.	G.D.Kunders. 2004. Hospital and facilities planning and Design - Tata McGraw Hill Publishing Ltd, Delhi
Reference Books	1.	Goel S L & Kumar R. 2004. Hospital Core Services: Hospital Administration of the 21st Century. Deep Deep Publications Pvt Ltd: New Delhi
	2.	S.K. Joshi. Quality Management in Hospitals. Jaypee Brothers Medical Publishers (P) Ltd, 2014, Delhi
	3.	S.L. Goel. 2004. Healthcare Organization and structure. Deep and Deep Publications Pvt. Ltd, New Delhi
	4.	David H. Holt. 1993. Management: principles and practices, Prentice Hall PTR, United States.

Journal and Magazines	https://www.iihmr.edu.in/event/report-healthcare-operations-management
E-Resources and Website	https://www.scribd.com/document/262184850/Principles-of-Hospital-Management

Learning Method	Chalk and Talk/Assignment/Seminar

Focus of the Course	Skill Development/Entrepreneurial Development/Employability

Semester - I
CORE 4: HOSPITAL CLINICAL OPERATIONS MANAGEMENT

Semester	Course Code	Course Name	Category	L	T	P	Credits
I	24HAP1CD	Hospital Clinical Operations Management	CORE	48	-	-	4

Preamble	This course has been designed for students to learn and understand • the specialties, sub specialties of medical field and various healthcare services • the important clinical functions and its management in Hospitals • the health policies of the nation and its impact on the Hospitals
Prerequisite	Basic knowledge about Clinical services in Hospitals

Course Outcomes (COs)

CO Number	Course Outcomes (COs) Statement	Bloom's Taxonomy Knowledge Level
CO1	Understand, Compare and analyze the specialties of hospitals and various healthcare services	K4
CO2	Learn the different types of functions performed in the diagnostic areas and pharmacy of the Hospital.	K4
CO3	Learn the different types of services performed in the wards, ICU and OT areas of the Hospital.	K5
CO4	Learn the different types of services performed in the specialized clinical areas of the Hospital.	K4
CO5	Distinguish and analyze the various health policies and health committees	K5

Mapping with Program Outcomes:

COs / POs	PO1	PO2	PO3	PO4	PO5
CO1	✓	✓			
CO2	✓	✓		✓	✓
CO3	✓	✓		✓	✓
CO4		✓		✓	
CO5		✓	✓		✓

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24HAP1CD CORE : HOSPITAL CLINICAL OPERATIONS MANAGEMENT

Syllabus

Unit	Content	Hours	E-Contents / Resources
I	**Overview of a Hospital** Hospital - Specialties and sub-specialties of a Healthcare Industry - AYUSH Healthcare Services - Outpatient and Inpatient Services	8	Text Book
II	**Hospital Facilities** Laboratory- Blood Bank- Radiology and Imaging- Pharmacy- Nutrition and Dietary Services - Rehabilitative Services	10	Reference Book 4
III	**Clinical Services** Ambulatory Care - Ward Services- Operation Theatre- Intensive Care Unit - Nursing Services - Accident and Emergency- Quality Department - Clinical Trial - Ethics Committee	10	Text Book
IV	**Special Services** Central Sterile Supply Department - Nuclear Medicine - Dialysis - Mortuary - Tele Medicine - Committees in Hospitals- functions - Safety codes followed in Hospitals	10	NPTEL
V	**Health Policy** Health Planning in India - National Health Policy - Overview of health policy (NHP-1986-2015-HFA2000) - National Housing Policy - National Nutritional Policy - National Population Policy and five year plans - Health Committees and recommendations - National Health Budget Programmes- Rockfeller Foundation- Ford Foundation – World Bank Programme	10	You Tube Videos
	Total	48	

Text Book	1.	G.D.Kunders. 2004. Hospital and facilities planning and Design - Tata McGraw Hill Publishing Ltd, Delhi
Reference Books	1.	S.K. Joshi. Quality Management in Hospitals. Jaypee Brothers Medical Publishers (P) Ltd, 2014, Delhi
	2.	S.L. Goel. 2004. Healthcare Organization and structure. Deep and Deep Publications Pvt. Ltd, New Delhi
	3.	James R. Langabeer. 2008. Health Care Operations Management: Jones & Bartlett Learning
	4.	Syed Amin Tabish, 2001. Hospital and Health services Administration: Principles and practices, Oxford University.

Journal and Magazines	Journal of Hospital and Medical Management
E-Resources and Website	https://www.edureka.co/blog/operations-management-in-hospitals

Learning Method	Chalk and Talk/Assignment/Seminar

Focus of the Course	Skill Development/Entrepreneurial Development/Employability

Semester - I
CORE: BIOSTATISTICS AND OPERATIONS RESEARCH

Semester	Course Code	Course Name	Category	L	T	P	Credits
I	24HAP1CE	Biostatistics and Operations Research	CORE	48	12	-	4

Preamble	This course has been designed for students to learn and understand • various concepts of Probability Distributions • how to compare Means of variations of more than two populations using ANOVA • the models of Transportation, Assignment and Queueing theory
Prerequisite	Knowledge on Basic Mathematics, Statistics and management.

Course Outcomes (COs)

CO Number	Course Outcomes (COs) Statement	Bloom's Taxonomy Knowledge Level
CO1	Demonstrate the concept of probability distribution	K2
CO2	Compare the relation between Correlation and Regression	K2
CO3	Apply chi-square test and Analysis of Variance.	K3
CO4	Apply the concept of transportation and Assignment problem	K3
CO5	Analyze the concept of project network scheduling	K4

Mapping with Program Outcomes:

COs / POs	PO1	PO2	PO3	PO4	PO5
CO1	✓	✓		✓	✓
CO2	✓	✓		✓	✓
CO3	✓	✓		✓	✓
CO4		✓			✓
CO5		✓	✓		✓

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M.Sc.(HA) (Students admitted during the A.Y.2024-25)

Syllabus

Unit	Content	Hours	E-Contents / Resources
I	**Probability Distributions:** Probability distribution – Observed theoretical distributions - Binomial distribution – Pascal's Triangle – Multinomial Expression-Poisson distribution – Continuous probability distribution - Normal distribution - Standard Normal distribution - Measures of deviation from the Normal Distribution - Kurtosis	12	Text Book 1
II	**Correlation and Regression:** Introduction- Correlation – significance of correlation – Bivariate and Multivariate Distribution – Types of Correlation – positive and negative correlation – Linear and Non-linear Correlation- Simple partial and multiple correlation- Measure of correlation – Objectives of Regression analysis- Regression coefficients- Difference between regression analysis and correlation analysis- Coefficient of determination.	12	Text Book 1
III	**Chi – Square Test and Analysis of Variance:** Formula for Determination of Chi – Square - Alternative formula - Chi – Square Distribution - Characteristics of Chi – Square Distribution - Working Rule for Chi – Square Test - 2x2 Contingency table - Calculation of Probability value - Assumptions of ANOVA - Test of ANOVA - Computation of Analysis of Variance ANOVA	12	Text Book 1
IV	**Transportation Problem and Assignment Model:** Definition- To represent Transportation problem as Linear Programming Problem Transportation Algorithm- North West Corner Rule to obtain Initial Basic Feasible Solution –Inspection Method to obtain Initial Basic Feasible Solution - Vogel's Approximation Methods to obtain Initial Basic Feasible Solution – Assignment problems – Difference between transportation and Assignment Models –To represent Assignment problems and transportation problems – Hungarian Algorithm	12	Text Book 2
V	**Queueing theory and CPM, PERT:** Introduction – Elements or Parameters of Queuing System – Steady state Balance Equation- Kendall's Notation for representing Queuing Models- Model 1: Single Server Model. Project planning using Critical path method – Terms used in CPM and PERT – Critical path method – Program Evaluation Review techniques – Difference between PERT and CPM	12	Text Book 2 & You Tube Videos
	Total	60	

Text Book	1.	Veer Bala Rastogi., 2011,"Fundamentals of Bio-Statistics", 2nd Edition. Ane Books Pvt.Ltd, New Delhi
	2.	Rajagopal K, 2012,"Operations Research" , First Edition, PHI Learning Pvt Ltd., New Delhi
Reference Books	1.	Annadurai, B., 2015, "A Text Book of Bio Statistics", 1st Edition, New Age International Pvt. Ltd, New Delhi
	2.	Crossand, and Moscrcadini A.O, 1976,"The Art of Mathematical Modeling", Ellis Harwood and John Wiley, New york
	3.	KantiSwarup, Gupta. P. K. and Man Mohan., 2007," Operations Research", 5th Edition. S. Chand & Sons Education Publications, New Delhi
	4.	Hamdy A. Taha., 2014, "Operations Research: An Introduction" 9th Edition, Pearson Education Publishers Pvt Ltd, New Delhi

Journal and Magazines	https://www.worldscientific.com/worldscinet/bms
E-Resources and Website	https://nptel.ac.in

Learning Method	Chalk and Talk/Assignment/Seminar

Focus of the Course	Skill Development/Employability/Entrepreneurial development

SEMESTER I							
CORE PRACTICAL -I :							
SPREADSHEET MANAGEMENT							
Semester	Course Code	CourseName	Category	L	T	P	Credits
I	24HAP1CP	SPREADSHEET MANAGEMENT	CORE	-	-	48	2

S.No   **List of Programs**

1   Prepare a Patient Record in Excel and perform the following: i. Prepare the Bill for the patient including the consultation fee and the no. of Tests taken.

2   Prepare an invoice excel sheet which consists of items, quantity and rate of the medicines purchased and do the following.
      i.   Using of Product Formula for Calculate Amount = Qty*Rate
      ii.   How Many Items qty Greater Then > 20 and Less Then <20
      iii.   Calculate Item Qty, Rate and Amount using Sumif Formula

3   Calculate patient bill amount based on patient ID using Vlookup functions.

4   Using nested if allot grade for nurses based on their marks.

5   Compare patient's data in excel using countif() functions.

6   Using Filter option extract the patient disease wise data

7   Apply multiple filtering criteria to extract the patient summary data.

8   Use pivot table option to summarize data in two or more sheets

9   Prepare a disease wise report using pivot table.

10   Calculate mean, standard deviation and standard error of the mean.

11   i.   Generate random numbers using random function.
    ii.   Identify the relation among variables using regression.

12   Plot different types of charts to visualize the patient details.

Semester - I
DSE 1: TOTAL QUALITY MANAGEMENT TOOLS AND TECHNIQUES

Semester	Course Code	Course Name	Category	L	T	P	Credits
1	24HAP1DA	TOTAL QUALITY MANAGEMENT TOOLS AND TECHNIQUES	DSE	48	-	-	4

Preamble	This course has been designed for students to learn and understand • the Fundamentals of Total Quality Management in a Hospital • the various tools and techniques used in TQM • the importance of documentation and role of auditing in TQM
Prerequisite	Basic knowledge about concept of Quality

Course Outcomes (COs)

CO Number	Course Outcomes (COs) Statement	Bloom's Taxonomy Knowledge Level
CO1	understand the concept and origin of TQM	K3
CO2	analyze various strategies of TQM (TEI, GLP, WITs, GMP)	K4
CO3	evaluate the various role in continuous improvement in TQM	K5
CO4	create and evaluate the various documentation on Quality Manual and Procedure	K6
CO5	understand and analyze various Internal Auditing in ISO systems	K4

Mapping with Program Outcomes:

COs / POs	PO1	PO2	PO3	PO4	PO5
CO1	✓	✓		✓	
CO2		✓	✓		✓
CO3		✓		✓	✓
CO4			✓	✓	✓
CO5	✓	✓			✓

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24HAP1DA DSE: TOTAL QUALITY MANAGEMENT TOOLS AND TECHNIQUES

Syllabus

Unit	Content	Hours	E-Contents / Resources
I	**Introduction to TQM** Concept of Quality in emerging scenario of TQM – Origin and Philosophy of TQM –Factors motivating introduction of TQM –Role of HRD in TQM – Role of Participatory culture in TQM - Importance of TQM	9	Text Book
II	**Role of Quality in Employee Involvement** TEI (Total Employee Involvement) Strategy in TQM – Role of TEI – small group activities in TQM – Role of Quality Circles and Work Improvement teams (WITs). Good Laboratory Practices (GLP) and Good Manufacturing Practices (GMP)	10	Reference Book 1
III	**Continuous Improvement in Quality** Role of Continuous Improvement in TQM – Benchmarking and Business process reengineering - Zero defects – Quality costs and Planket Burman method – Kaizen – JIT, TAGUCHI, SMED, CEDAC.	10	Text Book
IV	**Documentation** Apex (Quality System) Manual / Procedure and Departmental manuals and work Instructions preparations- Policy amendment and documentation	9	NPTEL
V	**Auditing** Auditing – Audit team and responsibilities - Audit protocol - Types of Auditing – Internal Auditing – Second and Third party auditing – Role of Internet Auditing in ISO Systems - Patient satisfaction survey	10	You Tube Videos
Total		**48**	

Text Book	1.	Bester field H. Dale. 2005. Total Quality Management. Pearson, London
Reference Books	1.	S.K.Joshi. 2009. Quality Management in Hospitals. Jaypee Brother Medical Publishers (P) Ltd, Delhii
	2.	Quality Management in Health Care, Principles and Methods, Donald Lighter and Douglas C Fair, Jones and Bartlett Publishers, 2004
	3.	Dr. R. Kiran. 2016.Total Quality Management: Key Concepts and Case Studies. 1st edition. Butterworth-Heinemann
	4.	John S. Oakland. 2014. Total Quality Management and Operational Excellence, 4th edition. Routledge.

Journal and Magazines	https://www.toolshero.com/quality-management/total-quality-management-tqm/
E-Resources and Website	http://www.uop.edu.pk/ocontents/pdf

Learning Method	Chalk and Talk/Assignment/Seminar

Focus of the Course	Skill Development/Entrepreneurial Development/Employability/Innovations

Semester - I
DSE -I: ENTREPRENEURSHIP

Semester	Course Code	Course Name	Category	L	T	P	Credits
I	24HAP1DB	Entrepreneurship	DSE	48	-	-	4

Preamble	This course has been designed for students to learn and understand • the concept of Entrepreneurship • the methods to create and start ventures • the role of Institutional support to Entrepreneurship
Prerequisite	Basic knowledge about Business

Course Outcomes (COs)

CO Number	Course Outcomes (COs) Statement	Bloom's Taxonomy Knowledge Level
CO1	understand the overview of Entrepreneurship	K3
CO2	Create ideas for venture planning and development	K4
CO3	evaluate feasibility for various business plan	K5
CO4	evaluate the financial aspects of new venture	K5
CO5	analyse the role of Institutional support to Entrepreneurship	K5

Mapping with Program Outcomes:

COs / POs	PO1	PO2	PO3	PO4	PO5
CO1	✓	✓		✓	
CO2	✓			✓	✓
CO3	✓	✓	✓	✓	✓
CO4			✓	✓	✓
CO5	✓	✓	✓		✓

Syllabus

Unit	Content	Hours	E-Contents / Resources
I	**Introduction to Entrepreneurship** Entrepreneurship- Concepts and Overview- Evolution of Entrepreneurship in India- Entrepreneurial Traits- Models of Entrepreneurship- Entrepreneur vs. Manager- Opportunities for Entrepreneurs- women entrepreneurship- rural entrepreneurship	10	Text Book
II	**Creating and Starting the Venture** Entrepreneurial decision process- Sources of new Ideas- Methods of generating ideas- Problem solving- Venture planning and development process	9	Reference Book 1
III	**Business Plan** Nature and scope of Business plan- Writing Business Plan- Evaluating Business plans- Implementing business plans- Market Feasibility- Technical Feasibility-Project Report Preparation- Launching formalities.	10	Text Book
IV	**Financing and Managing the new venture** Sources of capital-Financial viability and control- Marketing and sales controls - Joint ventures- Acquisitions- Mergers- Franchising- Public issues- Rights issues - Bonus issues and Stock splits.	10	NPTEL
V	**Institutional support to Entrepreneurship** Role of Directorate of Industries- District Industries Centers (DICs)- Industrial Development Corporation (IDC)- State Financial corporation (SFCs)- Commercial banks Small Scale Industries Development Corporations (SSIDCs)- Khadi and village Industries Commission (KVIC)- National Small Industries Corporation (NSIC)- Small Industries Development Bank of India (SIDBI)	9	You Tube Videos
	Total	**48**	

Text Book	1.	Robert D Hisrich, M P Peters, D A Shepherd. 2017. Entrepreneurship,, 10 edition, McGraw Hill
Reference Books	1.	Rajeev Roy. 2011Entrepreneurship, 2 nd edition, Oxford Higher Education
	2.	David H Holt, 2019, Entrepreneurship, New Venture Creation, Prentice Hall
	3.	Alexander Osterwalder & Yves Pigneur, 2010. Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers (The Strategyzer series), 1st edition),John Wiley and Sons
	4.	Robert D. Hisrich, Michael P. Peters, Dean A. Shepherd, 2018, "Entrepreneurship", 10th Edition, Tata McGraw Hill.

Journal and Magazines	https://xime.org/jme/jme-home
E-Resources and Website	https://www.iare.ac.in/sites/default/files/lecture_notes/IARE_Entrepreneurial_Development_NOTES.pdf

Learning Method	Chalk and Talk/Assignment/Seminar

Focus of the Course	Skill Development/Entrepreneurial Development/Employability/Innovations

Semester - I
DSE -1: TECHNOLOGY IN HEALTHCARE

Semester	Course Code	Course Name	Category	L	T	P	Credits
I	24HAP1DC	TECHNOLOGY IN HEALTHCARE	DSE	48	-	-	4

Preamble	This course has been designed for students to learn and understand • The functionals of the office Automation Applications & Database Management System • Knowledge in IOT & Hospital Information System • The Development of Mobile Health Care Services.
Prerequisite	Knowledge on Computer Fundamentals

Course Outcomes (COs)

CO Number	Course Outcomes (COs) Statement	Bloom's Taxonomy Knowledge Level
CO1	Understand functionals of the office Automation Applications	K3
CO2	Obtain knowledge on database environment	K3
CO3	Know the functions of IOT in Health Care	K3
CO4	Learn the concepts of Hospital Information System	K4
CO5	Analyze the various Applications in Health Care.	K5

Mapping with Program Outcomes:

COs / POs	PO1	PO2	PO3	PO4	PO5
CO1	✓			✓	✓
CO2		✓			✓
CO3	✓	✓		✓	✓
CO4			✓		
CO5	✓	✓			✓

Syllabus

Unit	Content	Hours	E-Contents / Resources
I	**Office Automation Applications** Office Automation Applications – Word Processor (MS - Word), Spreadsheet (MSExcel), Graphics & Presentation (MS-Powerpoint); Database Management System (ACCESS)-Internet & Advanced Communication-Internet applications for Health care- Case Study: Case Study on general Automation Office Applications.	10	Text Book1
II	**Database Management System** Database – Definition, terms, common function, Basic data processing, Database and spreadsheet operations - Database Management System – Introduction to database management system, design, development, deployment, and evaluation of database systems, data integrity, security- Electronic Health Records- Case Study on Database Management System.	8	Reference Book1
III	**Introduction to IoT** Introduction of Internet of Things (IoT): Physical Design of IoT, Logical Design of IoT, IoT Enabling Technologies, IoT Levels & Deployment Templates- IoT Design Methodology. IoT Physical Devices & Endpoints: Basic building blocks of an IoT device IoT Applications for Health & Lifestyle-IoT devices in health - Tele Health – Tele medicine- Case Study on IoT in Telemedicine.	10	Reference Book2
IV	**Hospital Information System (HIS)** Hospital Information System (HIS)- Advantages- Structuring Medical Records - Automated Clinical Laboratory Systems & Radiology Information System- Role of Database in HIS- Need of Networking in HIS-Inventory Management Systems (IMS) – main purpose of inventory management- types of inventory management essentials of a good Inventory Management Software- Benefits of an Inventory Management System in Healthcare - Case Study: Hospital Information System Case study on Process and Operations	10	Reference Book 3
V	**Mobile Health Services** Mobile Health Services-Medical Uses- Mobile Device Operating System Technology- Air Quality Sensing Technologies- Open Source Software Packages For Mhealth- Health Insurance Portals- Social Health Insurance- Community Based Health Insurance- Voluntary Health Insurance-Benefits- Key Features For Health Insurance Portals-Different Types Insurance Portal-Pros And Cons of Web Portals – Case Study: A case study of Mobile Health Units in Tamil Nadu.	10	Reference Book4
	Total	48	

Text Book	1.	Andra Cable, Steven M. Freund, Ellen Monk, Susan L. Sebok, Joy L. Starks, and Misty E. Vermaat, 2019 "Microsoft Office 365 & Office (2019) Introductory
Reference Books	1.	ElmasriRamez and NavatheShamkant.B,2017, "Fundamentals of Database Systems", (7th Edn.), Addison Wesley
	2.	ArshdeepBahga, Vijay Madisetti, ,2015,"Internet of Things" – A hands-on approach Universities Press
	3.	Joydeep Das Gupta, 2015, "Hospital Administration and Management", Jaypee Brothers Medical Publishers
	4.	Robert Istepanian , Swamy Laxminarayan , (2010),"M-Health: Emerging Mobile Health Systems", Springer

Journal and Magazines	https://www.inderscience.com/jhome.php?jcode=ijhtm
E-Resources and Website	https://www.javatpoint.com/iot-healthcaremHealth (who.int)

Learning Method	Chalk and Talk/Assignment/Seminar

Focus of the Course	Skill Development/Employability/Innovations

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Semester - II
CORE: HOSPITAL ARCHITECTURE DESIGN AND PLANNING

Semester	Course Code	Course Name	Category	L	T	P	Credits
II	24HAP2CA	HOSPITAL ARCHITECTURE DESIGN AND PLANNING	CORE	60	-	-	4

Preamble	This course has been designed for students to learn and understand • planning and operations of hospitals • to develop concepts and strategies for quality architectural projects • the design and maintenance of hospital systems
Prerequisite	Knowledge in Hospital Operations

Course Outcomes (COs)

CO Number	Course Outcomes (COs) Statement	Bloom's Taxonomy Knowledge Level
CO1	compare and analyze the changing roles of hospital	K4
CO2	assess the plan required to build a hospital	K4
CO3	analyse the various legal documents for hospital projects	K4
CO4	develop effective hospital standards and design	K5
CO5	design and create models of various departments of Hospitals	K5

Mapping with Program Outcomes:

COs / POs	PO1	PO2	PO3	PO4	PO5
CO1	✓	✓		✓	✓
CO2		✓	✓	✓	✓
CO3			✓	✓	✓
CO4				✓	✓
CO5			✓	✓	✓

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24HAP2CA	CORE: HOSPITAL ARCHITECTURE DESIGN AND PLANNING

Syllabus

Unit	Content	Hours	E-Contents / Resources
I	**Evolving Role of Hospitals** Hospital as a system - Various Departments in Hospital- Changing role of hospitals – Hospital Administrator - Roles and Functions	12	Text Book
II	**Hospital Planning** Process of Hospital planning – Compliance- Expandability- Operational and functional planning - Planning team – Site selection – Master plan – Zonal distribution – Space requirement –Facility Planning (NABH)- Green Field Vs Brown Field project- Ventilation & Lighting -construction & commissioning - Equipping a hospital- Budgeting	12	Reference Book 2
III	**Hospital Design** Hospital Project management - Role of architect - Designing - Clinical services - Supportive services - Utility services - legal formalities - Contract Administration-Environment regulations - Environmental Consideration- Equipment planning - Installation and Commissioning -Bed distribution - Space requirements - relationships	12	Text Book
IV	**Hospital Standards** General standards for designing hospital facilities – Design parameters – Patient Centered Care- Optimization - Licensing and documentation – Mechanical standards - Electrical standards – Standard for centralized medical gas system –Standards for Biomedical waste - Engineering standards - Safety and Security -Disaster management	12	Reference Book 1
V	**Recent trends in Hospital Planning** Green Hospital Design - Healing Architecture - Value added services in hospital - Virtual healthcare - Smart Hospitals.	12	Reference Book 2
	Total	60	

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Text Book	1.	M Shaharkar. 2009. Principles Hospital Administration and Planning, 2nd edition. Jaypee Brothers Medical Publishers (P) Ltd, New Delhi.
Reference Books	1.	Syed Amin Tabish. 2003. Hospitals and Nursing Homes Planning Organisations and Management Jaypee Brothers Medical Publishers (P) Ltd, Delhi
	2.	G.D.Kunders. 2007. Hospital Facilities Planning and Management. Tata McGraw Hill Pvt Ltd, New Delhi)
	3.	S.Choudry - Project Management, Tata McGrawhill Education Pvt Ltd
	4.	S.L. Goel. 2004. Healthcare Organization and structure. Deep and Deep Publications Pvt. Ltd, New Delhi.

Journal and Magazines	https://healthcaredesignmagazine.com/trends/architecture/
E-Resources and Website	http://surl.li/jojadq

Learning Method	Chalk and Talk/Assignment/Seminar

Focus of the Course	Skill Development/ Entrepreneurial Development/ Employability/ Innovations/ Social Awareness/ Environment

Semester - II
CORE : HEALTHCARE ECONOMICS

Semester	Course Code	Course Name	Category	L	T	P	Credits
II	24HAP2CB	HEALTHCARE ECONOMICS	CORE	48	-	-	4

Preamble	This course has been designed for students to learn and understand
	• concept of Economics in Healthcare
	• analyze healthcare and health insurance services
	• healthcare and economic growth
Prerequisite	Knowledge in

Course Outcomes (COs)

CO Number	Course Outcomes (COs) Statement	Bloom's Taxonomy Knowledge Level
CO1	apply economic laws in healthcare	K3
CO2	assess production and cost in healthcare	K4
CO3	evaluate healthcare market services	K5
CO4	assess health insurance schemes	K4
CO5	analyze the impact of healthcare on economic growth	K4

Mapping with Program Outcomes:

COs / POs	PO1	PO2	PO3	PO4	PO5
CO1	✓	✓	✓		
CO2		✓			
CO3			✓	✓	✓
CO4			✓	✓	✓
CO5			✓	✓	✓

24HAP2CB	CORE: HEALTHCARE ECONOMICS

Syllabus

Unit	Content	Hours	E-Contents / Resources
I	**Fundamental Concepts** Economics and Healthcare Economics- Healthcare: need and importance – Theory of Utility- Theory of Demand- Concepts of Price-income-Cross Price Elasticities- Demand and Supply of Healthcare and Determinants – Healthcare: Issues and Challenges - Roles and Responsibilities of a Health Economist	8	Text Book
II	**Production and Cost Concepts** Price determination - Grossman's model of healthcare – Theory of Production - Production of Health and Healthcare - Health production function – Investment in Healthcare – Capital Budgeting and Types - Concept of Economic Evaluation –Types	10	Text Book
III	**Healthcare Services** Healthcare Industry in India - Healthcare System – Public and Private – Corporate Social Responsibility - Market Failure in Healthcare – Need for Government Intervention in Healthcare Services – National Health Policy – Universal Health Coverage (UHC)- Government Schemes	10	Text Book
IV	**Health Insurance** Health Insurance – Importance - Features of Health Insurance Policies - Fiscal & Monetary policy- Challenges of Public Sector/ Government Sector - Demand and Supply for Health Insurance - Factors Influencing Demand - Theories of Decision Making in Health Insurance - Medicaid and Medicare - Employer Sponsored Insurance - Cost Sharing - Uninsured - Moral Hazard.	10	Reference Book 1
V	**Healthcare and Economic Growth** Health Indicators – Healthcare Financing across Different Countries of the World and in India –	10	Reference Book 3

		Importance of PPP Model- Alternative Models of Hospital Behaviour- Utility Maximizing Model- Physician Control Models		
		Total	48	

Text Book	1.	N. K. Anand & ShikhaGoel (2008), Health Economics, A.I.T.B.S. Publishers, India.
Reference Books	1.	James W. Henderson (2005), Health Economics and Policy, Centage Learning India Pvt. Ltd., New Delhi
	2.	Haggard, Odeyar, D, Hospital Management, Mohit Publications, New Delhi)
	3.	Dutta Shuvendu Bikash (2013), Health Economics for Hospital Management, Jaypee Brothers Medical Publishers
	4.	Sumitra Naha (Das) (2021), Introduction to the Economics of Health and Education, Abhijeet Publications..

Journal and Magazines	https://www.sciencedirect.com/journal/journal-of-health-economics
E-Resources and Website	https://www.cartercenter.org/resources/pdfs/health/ephti/library/lecture_notes/health_science_students/ln_intro_to_health_economics_final.pdf

Learning Method	Chalk and Talk/Assignment/Seminar

Focus of the Course	Skill Development/Entrepreneurial Development/Employability/ Social Awareness/ Environment/ Constitutional Rights/ Human Values/ Ethics

Semester - II

CORE : HUMAN RESOURCE MANAGEMENT AND INDUSTRIAL RELATIONS

Semester	Course Code	Course Name	Category	L	T	P	Credits
II	24HAP2CC	HUMAN RESOURCE MANAGEMENT AND INDUSTRIAL RELATIONS	CORE	60	-	-	4

Preamble	This course has been designed for students to learn and understand • the functional areas of Human Resource Management in Healthcare industry • the process of Human Resource Management in the Healthcare Industry • the Performance Appraisal System and Employee Welfare Acts
Prerequisite	Knowledge on Management concept

Course Outcomes (COs)

CO Number	Course Outcomes (COs) Statement	Bloom's Taxonomy Knowledge Level
CO1	apply the concepts of HRM among the healthcare personnel	K3
CO2	analyze the demand and supply forecast in HR management	K4
CO3	evaluate the functions of HR in Healthcare Industry	K5
CO4	formulate the performance appraisal strategies used in the healthcare industries	K5
CO5	assess various employee welfare acts related to healthcare industry	K5

Mapping with Program Outcomes:

COs / POs	PO1	PO2	PO3	PO4	PO5
CO1	✓	✓	✓		
CO2	✓	✓		✓	
CO3	✓		✓	✓	✓
CO4			✓	✓	
CO5		✓	✓	✓	✓

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24HAP2CC	CORE: HUMAN RESOURCE MANAGEMENT AND INDUSTRIAL RELATIONS

Syllabus

Unit	Content	Hours	E-Contents / Resources
I	**Concept of Human Resource Management** HRM- Meaning and Definition- Objective- Importance- Nature- Characteristics- Functions and Role of HRM – HR systems- HR Policies and procedures	12	Text Book
II	**Job Analysis, Career Planning and Development** Job design – Job analysis - Job description - Job specification – Manpower requirement Analysis - Job roles – Job Enrichment – Job Enlargement - Re-skilling - Up-skilling - Promotion – Transfer- Demotion – Employee engagement - Absenteeism- Labour turn over - Steps in Career Planning and Development	12	Reference Book 2
III	**Recruitment and Selection, Training** Objectives of Recruitment - Recruitment policy – Sources of recruitment – Traditional techniques- Modern techniques – Selection- Selection procedure – Placement – Induction - Competency Mapping- Talent Management - Training - Process - Need analysis - Training techniques- Training effectiveness.	12	Text Book
IV	**Performance Appraisal and Compensation Management** Definition – Purpose- Process - Performance Appraisal Indicators- Methods of appraisal- Traditional Method - Modern Methods- Compensation Management- Planning- Managing Employee Benefits - Retention, Replacement cost - Grievance Redressal of System- Role of HR in Safety management	12	Reference Book 1
V	**Employee's Welfare Acts** Factories Act, 1948 - Maternity Benefit Act,1961 - Employee State Insurance Act, [ESI] 1948 - Employees' Provident Fund Scheme, 1952 - Payment of Bonus Act, 1965 – Workmen's Compensation Act, 1923 – Contract Labour Act (R&A), 1970 -Payment of Gratuity Act 1972- Introduction to payment of wages act 1936	12	Reference Book 2
	Total	60	

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Text Book	1.	R.C.Goyal. 2005. Hospital Administration and Human Resource Management. 4th Edition.Prentice hall of India Pvt Ltd, New Delhi.
Reference Books	1.	Subbarao. 2009. Personnel and Human resource Management Text and cases. , 4th Edition. Himalaya Publishing House Pvt Ltd, Mumbai
	2.	R.S. Davar.1988. Reprinted 2010. Personnel Management and Industrial relations. 12th revised Edition. Vikas Publishing House Pvt Ltd, New Delhi
	3.	Dipak Kumar Bhattacharyya 2011. Performance Management System & Strategies. Dorling Kinderseley (India) Pvt. Ltd , Noida
	4.	Gary Dessler, 2017. Human Resource Management. 15th Edition. Pearson Publications, New Delhi.

Journal and Magazines	https://www.managementstudyguide.com/human-resource-management.htm
E-Resources and Website	http://www.whatishumanresource.com/hrm-linkage-with-labour-laws

Learning Method	Chalk and Talk/Assignment/Seminar

Focus of the Course	Skill Development/Entrepreneurial Development/Employability/ Gender Sensitization/ Social Awareness/ Environment/ Constitutional Rights/ Human Values/ Ethics

Semester - II
CORE : MATERIALS MANAGEMENT

Semester	Course Code	Course Name	Category	L	T	P	Credits
II	24HAP2CD	MATERIALS MANAGEMENT	CORE	48	-	-	4

Preamble	This course has been designed for students to learn and understand • the process of integrated material management system • the Stores and Inventory Management Techniques in Hospitals • the application of Information Technology in Hospital stores
Prerequisite	Knowledge in Management

Course Outcomes (COs)

CO Number	Course Outcomes (COs) Statement	Bloom's Taxonomy Knowledge Level
CO1	classify different concepts of Integrated Materials Management in healthcare industry	K3
CO2	evaluate the system involved in purchase management	K5
CO3	analyze and develop store management techniques	K5
CO4	develop the strategic concepts of inventory management in Healthcare	K5
CO5	outline the application of Information Technology in stores	K4

Mapping with Program Outcomes:					
COs / POs	PO1	PO2	PO3	PO4	PO5
CO1	✓	✓			
CO2		✓		✓	
CO3		✓	✓	✓	✓
CO4		✓	✓	✓	✓
CO5			✓	✓	✓

24HAP2CD	CORE: MATERIALS MANAGEMENT

Syllabus

Unit	Content	Hours	E-Contents / Resources
I	**Integrated Materials Management** Need for Integrated Concept – Definition and scope – Advantages in Integrated Material Management Concept- Organization Based on Commodities – Functions –Location – Interdepartmental Relationship – Warehousing - Functions- Types-Material Planning and Budgeting	8	Text Book
II	**Purchasing Management** Purchase System - Functions – Price Forecasting – Purchase of Capital Equipments - International Purchasing – EXIM Policy and Procedure- Vendor Management - Buyer and Seller Relation and Ethics- Tendering Procedures- Purchase Vs Leasing Decision- Surplus and Scrap Management	10	Reference Book 4
III	**Stores and Inventory Management** Definition – Concept of Stores- Types of Stores- System and Procedures – Role and Functions of Store Manager- Hygiene Standards in Stores - Stores Accounting- Stock verification- Stock adjustment- Stock valuation methods- Space Management	10	Text Book
IV	**Inventory Management and Techniques** Inventory Management – Different Types of Hospital Inventories - Techniques in Inventory Management – LIFO - FIFO - EOQ, ABC, VED, FSN Analysis–5S techniques in stores management - Card System and Use Of Bin Cards- Quality Control- Value Analysis, Condemnation & Disposal	10	Reference Book 2
V	**Information Technologies in Materials Management** Material Resource Planning System –MIS Reports in Material Management - Product Coding and Tracking - e-Procurement-Various Purchase and Store Modules - Software in Materials Management	10	Reference Book 1
	Total	48	

Text Book	1.	P.Gopalakrishnan and Sundaresan. 2011. Materials Management an Integrated Approach. Prentice Hall of India Pvt. Ltd, New Delhi.
Reference Books	1.	M.M.Varma. 2010. Materials Management. 4th Edition. Sultan Chand & Sons New Delhi
	2.	Shakthi Gupta. Sunil Kant. 2012. Hospital Stores Management an Integrated Approach. Jay pee Brothers medical publishers Pvt. Ltd, New Delhi
	3.	Rajendra Mishra. 2007. Materials Management, Excel Books Pvt. Ltd , New Delhi
	4.	P.Gopalakrishnan. 2006. Purchasing and Materials Management, Tata McGraw-Publishing Company Limited

Journal and Magazines	https://iimm.org/national-publications/
E-Resources and Website	https://www.purchasing-procurement-center.com/hospital-materials-management.html

Learning Method	Chalk and Talk/Assignment/Seminar

Focus of the Course	Skill Development/Entrepreneurial Development/Employability/ Innovations

Semester - II

CORE : HEALTHCARE MARKETING AND STRATEGIC MANAGEMENT

Semester	Course Code	Course Name	Category	L	T	P	Credits
II	24HAP2CE	HEALTHCARE MARKETING AND STRATEGIC MANAGEMENT	CORE	60	-	-	3

Preamble	This course has been designed for students to learn and understand - Service marketing from planning to pricing strategies including control and research - the nature of Business Policy and Strategic Management, Characteristics of Strategic Decisions and Business Ethics - the creative problem analysis and evaluate the strategic alternatives
Prerequisite	Knowledge on Management concept

Course Outcomes (COs)

CO Number	Course Outcomes (COs) Statement	Bloom's Taxonomy Knowledge Level
CO1	build and apply knowledge on general aspects of service marketing	K3
CO2	assess marketing mix variables and a practical application in context to marketing management	K4
CO3	analyze the Nature of Business Policy and Strategic Management, and Business Ethics	K5
CO4	explain in detail about Strategic Management process subjective to marketing management	K5
CO5	explain and develop detailed idea about the environmental analysis and its industrial applications	K5

Mapping with Program Outcomes:

COs / POs	PO1	PO2	PO3	PO4	PO5
CO1	✓	✓		✓	
CO2		✓	✓	✓	
CO3		✓	✓	✓	
CO4		✓	✓	✓	
CO5		✓	✓	✓	✓

24HAP2CE	CORE: HEALTHCARE MARKETING AND STRATEGIC MANAGEMENT

Syllabus

Unit	Content	Hours	E-Contents / Resources
I	**Marketing Concept** Marketing concepts- Need- Principles- Services –Marketing environment– Five I's – Salient features- Classification of services – Dichotomous classification of services – Cross classification of Services – Schmenner's Classification	12	Text Book
II	**Dimensions of Marketing** Process – Elements – Service Expectations – Performance – Market Economic Dimensions – Service Style – Segmentation Variables – Market Targeting in Services – Customer loyalty - Customer Bonding	12	Reference Book 2
III	**Marketing Mix & Advertising** Elements of Marketing Mix – Service Marketing triangles - 4A's of Marketing- 7P's of Service Marketing - Collaborative Marketing – Media Relations - Branding – Advertisement – Promotion - Free Health Camps - Digital Marketing for Hospital	12	Text Book
IV	**Strategic Management** Introduction – Nature of Business Policy and Strategic Management – Strategic Management Process – Strategic Decision Making- Characteristics - Corporate Governance - Business Ethics – Strategic Change – Creative Problem Analysis	12	Reference Book 1
V	**Strategic Analysis Tools** SWOT Analysis – PESTLE Analysis- Porter's five force model- Blue ocean strategy - VRIO Framework- Portfolio Analysis using BCG- Strategic management process – Corporate Social Responsibility	12	Reference Book 1
	Total	60	

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Text Book	1.	Mr. Nimit Chowdhary and Mrs. Monika Chowdhary. 2015.Text Book of Marketing services. Macmillan India Limited. (Third Edition).
Reference Books	1.	P.Subba Rao. 2011. Business Policy and Strategic Management. Himalaya Publishing House,(Fourth Edition)
	2.	Philip Kotler and Gary Armstrong. 2012. Principles of Marketing. Pearson Education Pvt Ltd, (Twelth Edition).
	3.	Philip Kotler, Joel Shalowitz and Robert J. Stevens. 2008. Strategic Marketing For Health Care Organizations: Building A Customer-Driven Health System.Jossey- Bass(First Edition)
	4.	Peter.M. Ginter. 2013. Strategic Management of Healthcare Organization. Jossey- Bass Publication, (Seventh Edition.

Journal and Magazines	https://www.evariant.com/faq/what-is-healthcare-marketing
E-Resources and Website	https://www.wallstreetmojo.com/strategic-management/

Learning Method	Chalk and Talk/Assignment/Seminar

Focus of the Course	Skill Development /Entrepreneurial Development /Employability/ Innovations/ Social Awareness/ Environment/ Constitutional Rights/ Human Values/ Ethics

Semester - II

DSE: APPLICATION OF QUALITY IN HEALTHCARE

Semester	Course Code	Course Name	Category	L	T	P	Credits
II	24HAP2DA	APPLICATION OF QUALITY IN HEALTHCARE	DSE	48	-	-	4

Preamble	This course has been designed for students to learn and understand • various benchmarking and process re-engineering in Quality system • quality function deployment and statistical tools for quality • the planning and implementation of quality management systems
Prerequisite	Knowledge in Quality Management

Course Outcomes (COs)

CO Number	Course Outcomes (COs) Statement	Bloom's Taxonomy Knowledge Level
CO1	analyze the concept of Benchmarking system	K3
CO2	asses the Quality Functional Deployment and Benefits	K4
CO3	evaluate Organizational Re-engineering framework and impact assessment	K5
CO4	evaluate the statistical process control and its development	K5
CO5	design the Quality Management System in Healthcare	K5

Mapping with Program Outcomes:

COs / POs	PO1	PO2	PO3	PO4	PO5
CO1	✓	✓			
CO2		✓		✓	✓
CO3			✓	✓	✓
CO4			✓	✓	✓
CO5		✓	✓	✓	✓

24HAP2DA	DSE: APPLICATION OF QUALITY IN HEALTHCARE		

Syllabus

Unit	Content	Hours	E-Contents / Resources
I	**Benchmarking Process** Benchmarking – Introduction – Process of Benchmarking – Benefits – Pitfalls – Success Indicators – Gap Analysis process – Benchmarking template – Initiating the process of Benchmarking - Application	8	Text Book
II	**Quality Function Deployment Concept** Quality Function deployment –QFD Concept – QFD process – QFD Team – Benefit of QFD – Patient feedback – House of Quality	10	Reference Book 1
III	**Business Process Reengineering** Organizational Reengineering – Conceptual framework process – Process Re- engineering- BPR Philosophy – Possibilities and pitfalls – Opportunity assessment – Impact Assessment – Planning Implementation of the transition	10	Reference Book 2
IV	**Statistical Process Control** History - Development - Statistical fundamentals - Pareto diagram - Process flow diagram - Cause and effect diagram - Check sheets - Histogram –Various Control charts – Different Control charts for Variable state of Control – Scatter Diagrams – Problems & Application	10	Text Book
V	**Quality Management System in Healthcare** Essentials of Quality Improvement in Healthcare - Implementation of Quality Management System in a Hospital - Evaluation of the success of QMS - Statistical approach - Medical Audit - Nursing Audit - Equipment Audit - Patient Satisfaction	10	Reference Book 3
	Total	48	

Text Book	1.	Bester field H. Dale. 2005. Total Quality Management, Pearson, London
Reference Books	1.	S.K. Joshi. Quality Management in Hospitals. Jaypee Brothers Medical Publishers (P) Ltd, 2014, Delhi
	2.	John S. Oakland. 2014. Total Quality Management , 3rd edition. Butterworth- Heinemann Publications
	3.	S.Saravanavel & S.Balakumar .2015. Total Quality Management, Margham Publications
	4.	Prof. K. Shridhara Bhat.2010, Total Quality Management, Global Media.

Journal and Magazines	https://academic.oup.com/intqhc
E-Resources and Website	http://www.fmshk.org/database/articles/06mbdrflkay.pdf

Learning Method	Chalk and Talk/Assignment/Seminar

Focus of the Course	Skill Development/Entrepreneurial Development/Employability/ Innovations

Semester - II

DSE: INNOVATION IN ENTREPRENEURSHIP

Semester	Course Code	Course Name	Category	L	T	P	Credits
II	24HAP2DB	INNOVATION IN ENTREPRENEURSHIP	DSE	48	-	-	4

Preamble	This course has been designed for students to learn and understand • the importance of Innovation in Entrepreneurship • the different business models to generate innovative ideas • the concepts to create innovation and strategic development in entrepreneurship
Prerequisite	Knowledge in Entrepreneurship

Course Outcomes (COs)

CO Number	Course Outcomes (COs) Statement	Bloom's Taxonomy Knowledge Level
CO1	understand the concept of Innovation	K3
CO2	analyze the concept of creative thinking	K4
CO3	evaluate the various business models	K5
CO4	assess the technology innovation process for patent and copyright.	K5
CO5	analyze the strategic involvement for sustainable innovation and future market.	K4

Mapping with Program Outcomes:					
COs / POs	PO1	PO2	PO3	PO4	PO5
CO1	✓		✓	✓	
CO2	✓	✓	✓		✓
CO3	✓	✓		✓	✓
CO4		✓	✓		✓
CO5	✓	✓	✓	✓	

24HAP2DB	DSE: INNOVATION IN ENTREPRENEURSHIP

Syllabus

Unit	Content	Hours	E-Contents / Resources
I	**Concept of Innovation** Innovation - Invention Vs Innovation - Innovation and Creativity - Innovation in Current Environment - Types of Innovation - Product innovation and process - Characteristics of innovation in different sectors	8	Text Book
II	**Innovation Management** Experimentation in Innovation Management - Steps of Innovation Management - Innovation as a systematic practice - Idea Management System - Divergent V/s Convergent Thinking - Challenges of Innovation - Design Thinking - Idea Championship - Participation for Innovation - Co-creation for Innovation	10	Reference Book 1
III	**Business models and prototyping** Business Model - Creativity Business model Vs Classical Approach - Evolution of the business model - Generation of ideas: Brainstorming - Exploration of business models for material efficiency services - Proto typing to Incubation - Business Plan	10	Reference Book 2
IV	**Patents and Copyrights** Marketing of Innovation - Technology Innovation Process - Technological Innovation Management Planning and strategies - Management of Innovation - creation of IPR - Types of IPR - Patents and Copyrights - Patents in India.	10	Text Book
V	**Sustainable innovation and future markets** Sustainability Innovation and Entrepreneurship - Innovation Sustainable Conditions - Innovation: Context and Pattern - SME'S strategic involvement in sustainable development - Business Model Failure: Reasons and Remedies -Incubators: Business Vs Technology - Managing	10	Reference Book 3

	Investor for Innovation - Future markets and Innovation needs for India.		
	Total	**48**	

Text Book	1.	Peter F Drucker (2006). Innovation and entrepreneurship. Harper Business
Reference Books	1.	Osterwalder, A and Pigneur, Y (2009). Business Model Generation. (1stEdn.), Alexander Oster & Yves Pigneur Publishers
	2.	Rishikesha T. Krishnan and Vinay Dabholkar . 8 Steps To Innovation : Going From Jugaad To Excellence)
	3.	John Bessant and Joe Tidd,,. (2008). , Innovation and Entrepreneurship. (1st Edn.) Wiley (2nd edition)
	4.	Robert D. Hisrich, Michael P. Peters, Dean A. Shepherd, 2018, "Entrepreneurship", 10th Edition, Tata McGraw Hill.

Journal and Magazines	https://journals.sagepub.com/overview-metric/JOE?
E-Resources and Website	https://www.tandfonline.com/toc/tepn20/current

Learning Method	Chalk and Talk/Assignment/Seminar

Focus of the Course	Skill Development/Entrepreneurial Development/Employability/ Innovations/ Gender Sensitization/ Social Awareness/ Environment/ Constitutional Rights

Semester - II

DSE: HEALTHCARE DATA MANAGEMENT

Semester	Course Code	Course Name	Category	L	T	P	Credits
II	24HAP2DC	HEALTHCARE DATA MANAGEMENT	DSE	48	-	-	4

Preamble	This course has been designed for students to learn and understand • principles and practices in Healthcare Data Management • processing and management of Electronic Health Records • statistical measures and Information Security in Healthcare
Prerequisite	Knowledge in Technology in Healthcare

Course Outcomes (COs)

CO Number	Course Outcomes (COs) Statement	Bloom's Taxonomy Knowledge Level
CO1	understand the standards in Health Information Documentation	K3
CO2	appraise Health Information Management functions in health records	K4
CO3	compare the technologies in Electronic Health Record management	K4
CO4	analyze the various statistical measures used in healthcare data	K4
CO5	formulate the elements of Information Security	K5

Mapping with Program Outcomes:

COs / POs	PO1	PO2	PO3	PO4	PO5
CO1	✓		✓		✓
CO2		✓	✓	✓	
CO3	✓	✓		✓	✓
CO4		✓	✓	✓	✓
CO5	✓	✓			✓

24HAP2DC	DSE: HEALTHCARE DATA MANAGEMENT

Syllabus

Unit	Content	Hours	E-Contents / Resources
I	**Health Information Management** History of Health Information Management - Health Record : Purpose - Functions - Documentation Standards - Health Record Documentation: Acute Care Health Record Documentation - Principles and Practices - Format - Healthcare Data Sets : Data Sets- Types- Emerging Health Information Standards	10	Text Book
II	**Health Information Functions and Data sources** HIM Functions and Services- Master Patient Index- HIM Functions in an Electronic Environment - Legal Health Record - Clinical Coding - Secondary Data Sources : Differences between Primary and Secondary Data Sources and Databases- Purposes and Users - Types - Processing and Maintenance of Secondary Databases	10	Text Book
III	**Electronic Health Record** Electronic Health Record : Introduction - The EHR System- EHR System Applications- Challenges in Implementation - Initiatives and Framework - Technologies -Databases and Data Storage - Hardware Infrastructure- Acquisition-Information Management- Future Directions	10	Text Book
IV	**Statistics in Healthcare** Introduction to measurement – Discrete Vs continuous Data – Statistical measures in healthcare – Statistical data used in healthcare – Patient care and clinical statistical data- Case-Mix statistical data- Presentation of Statistical Data - Descriptive Statistics	10	Text Book
V	**Data Visualization** Handling Data -Formatting Data: Data formats- Formatting tools - Formatting with code-Ratios–Rates: - Visualizing Rates- Proportions and Percentages- Scatterplots -	8	Reference Book 1

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	Regression and Trend Lines- The Timeline - Dashboards - Types of Dashboards - Building Exploratory Dashboards–		
	Total	**48**	

Text Book	1.	Nanette B Sayles, Health Information Management Technology: An Applied Approach, 2012, 4th Edition, Ahima Press
Reference Books	1.	Ben Jones, Communication Data with Tableau, 2014, 1st Edition., O'Reilly Media
	2.	Yang, Eva K.Lee, Healthcare Data Analytics : From Data to Knowledge to Healthcare Improvement, 2016, Wiley)
	3.	Horton L, Calculating and Reporting Healthcare Statistics, 5th Edition, 2017, AHIMA Press)
	4.	L B Madsen, Data-Driven Healthcare - How Analytics and BI are Transforming the Industry, 2014 , Wiley..

Journal and Magazines	https://journals.sagepub.com/home/HIM
E-Resources and Website	https://www.healthtechmagazines.com/healthcare-analytics/

Learning Method	Chalk and Talk/Assignment/Seminar

Focus of the Course	Skill Development/Entrepreneurial Development/Employability/ Innovations/ Constitutional Rights

ग्रामा√

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