National Curriculum and Credit Framework (NCCF)
Syllabus
for
Bachelor of Business Administration (Hospital Management)
w.e.f. Academic Session 2023-24

Kazi Nazrul University
Asansol, Paschim Bardhaman
West Bengal 713340

SEMESTER- I

MAJOR COURSE-1

Course Name: Hospital Operation Management-I
Course Code: BBAHMMJ101

Course Type: MAJOR (Theoretical)	Course Details: MJC-1			L-T-P: 4-1-0	
Credit: 5	Full Marks: 100	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
		0	30	0	70

Course Objective: This subject focuses on the basic operational procedures, organizational structure, regular issues, and related strategies to solve problems for a hospital organization in the modern world. Students will learn and embed the skills requires for managing a modern hospital with multiple beds and services.

Learning Outcome:

After completion of the course learners can
1. Define hospital; relate hospital as an organization in different social structures.
2. Learn hospital organization, hierarchy, and relationship matrix as a complex organization.
3. Understand hospital day-to-day operational issues, managerial issues, and leadership functions in various departments including value addition to the community.
4. Evaluate the hospital organization through internal and external environmental analysis and effective uses of strategies at different levels of the hospital organization.
5. Overall ability to discuss and critically evaluate the mission, vision, and goal statements of any organization.

Unit 1: Concept and Definition of Health, Dimensions of health, Concept of Well-being- Quality of health, Spectrum of health, Determinants of Health, right to health and responsibility for health, Indicators of health- mortality, morbidity, disability, nutritional status, healthcare delivery, utilization rate, social and mental health, environmental, socio-economic, health policy, quality of life indicators; Primary healthcare and declaration of Alma Ata, Health for all.

Unit 2: Hospital: Definition, the role of the hospital in healthcare, hospital as a system, as a social system; Types of hospitals; History of hospitals, history of hospitals in India; Hospital and community relationship. Primary, Secondary, Tertiary, and Quaternary healthcare services. Definition of Health and Concept of Health.

Unit 3: Hospital as an organization- overview, managerial hierarchy, different organizational structure of hospitals; role of a hospital manager in different managerial levels; Governing body and different hospital committees; Concept and issues in the management of hospitals in India; different organizational issues in hospital; Value chain system.

Unit 4: Strategic management- definition, the process of strategic management, Strategic intent- Mission, Vision, Goal, Philosophy; Environmental analysis: SWOT analysis, PESTEL Analysis, Porter's 5 forces model.

Unit 5: Level of strategies: Corporate level- Portfolio Analysis, BCG, GE-McKinsey; Strategic Business Units- Generic business strategies, Functional level.
Strategic evaluation- Balance scorecard, Benchmarking.

Suggested Readings:

1. Principles of Hospital Administration and Planning- BM Sakharkar, JAYPEE, 2nd Edition.
2. Managing a Modern Hospital- Edited by A.V. Srinivasan, Response SAGE Publication, 2nd Edition.
3. Hospital Administration- DC Joshi and Mamta Joshi, JAYPEE
4. Hospital Management- Text and Cases- K.V. Ramani- PEARSON
5. Strategic Management- An Integrated Approach- Charles W. L. Hill and Gareth R. Jones, CENGAGE Learning, 9th Edition.
6. Strategic Management: The Indian Context- R. Srinivasan, Prentice Hall India Learning Private Limited.

Teaching-Learning Process:

The teaching-learning process may be interactive classroom sessions with the help of PowerPoint presentations, reflective assessments, and case study discussions to ensure active participation and continuous learning.

Assessment Methods:

Internal Examinations (30 marks): Internal assessment may be conducted by using any one or in combinations of Class participation, Presentation, Project writing, Case studies, Assignments, and Surprise tests as suitable.

External Examination (70 Marks): End Semester Written Examination, duration 4 hours.

MINOR COURSE - 1

Course Name: Principles Of Management & Organizational Behaviour
Course Code: BBAHMMN101

<table>
<tr><td>Course Type:
MINOR
(Theoretical)</td><td colspan="3">Course Details: MNC-1</td><td colspan="2">L-T-P: 4-1-0</td></tr>
<tr><td rowspan="3">Credit: 5</td><td rowspan="3">Full Marks:
100</td><td colspan="2">CA Marks</td><td colspan="2">ESE Marks</td></tr>
<tr><td>Practical</td><td>Theoretical</td><td>Practical</td><td>Theoretical</td></tr>
<tr><td>0</td><td>30</td><td>0</td><td>70</td></tr>
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Course Objective:

The objective of the "Principles of Management & Organizational Behaviour" course is to provide students with a foundational understanding of management principles and the dynamics of organizational behavior. The course aims to equip students with essential knowledge, skills, and insights to effectively manage people, resources, and processes in various organizational settings.

Learning Outcome:

After completing the course, the student shall be able to:

1. Understand the evolution of management and apprehend its effect on future managers.
2. Analyze how organizations adapt to an uncertain environment and decipher decision-making techniques managers use to influence and control the internal environment.
3. Comprehend the changes happening in organization structure over time.
4. Analyze the relationship amongst functions of management i.e. planning, organizing, directing, and controlling.
5. Appreciate the changing dynamics of management practice.
6. Develop an understanding of different approaches to designing organizational structures.
7. Understand the role of personality, learning, and emotions at work.
8. Discover and understand the concept of motivation, leadership, power, and conflict.
9. Understand the foundations of group behavior and the framework for organizational change and development.

Unit 1: Nature, Scope and Process of Management: Concept of Management, Role and Importance of Management, Functions and Levels of Management, Management – A Science and an Art; Evolution of Management Thought: Early Contributors to Management Thoughts; Scientific Management, Administrative Theory of Management.

Unit 2: Planning and Organizing: Features of Planning, Importance, Steps, Types. Decision- making; Formal and Informal Organizations, Organization Structure: Line and staff, Delegation of Authority, Centralization and decentralization, Departmentalization: Concept and Types, Span of Management.

Unit 3: Leadership, Coordination and Control: Leadership, Functions and Importance, Qualities of a Good Leader, Leadership Styles. Concept and features of Coordination, Nature of Control, Relationship between Planning and Control, Elements of control system.

Unit 4: Introduction to Organizational Behaviour: Concept, learning objectives, Challenges and Opportunities of Organisational Behaviour (OB), Issues in Developing an OB Model; Characteristics of Human Behaviour.

Unit 5: Personality, Perception, Motivation & Group Dynamics: Personality: Concept and Types, Major determinants. MBTI, Type-A and Type- B Theory; Perception: Concept, Factors influencing Perception; Learning: Concept; Attitude: Concept, Different Job Attitudes; Motivation: Concept, Basic Theories of Motivation (Maslow, Herzberg, McClelland and McGregor); Group Dynamics: Concept of group, Stages of Group Development, Types of Groups, Work Teams Vs. Work Groups, Group Synergy.

Suggested Readings:

1. Management: Theory and Practice- C.B. Gupta, Sultan Chand and Sons Educational Publishers.
2. Principles and Practice of Management- Dr. L.M. Prasad, Sultan Chand and Sons Educational Publishers, 6th Edition.
3. Principles of Hospital Administration and Planning- BM Sakharkar, JAYPEE, 2nd Edition.
4. Management Case Studies: A student's Handbook- R.K. Yaraddi, Dr. R. R Kulkarni, Dr. S.R.Patil, R.R Navalagi, Notion Press, 1st Edition.
5. Essentials of Management: Weihrich and Koontz, et al, Tata McGraw Hill.
6. Management: Stoner J and Freeman RE, Prentice-Hall.
7. Management: Daft, RL, Thomson.
8. Organizational Behaviour- Stephen P. Robbins, Timothy A. Judge, Neharika Vohra, Pearson, 18th Edition
9. Managing Organizational Behaviour- Dr. V.S.P Rao, V. Sudeepa, Laxmi Publication Pvt Ltd, 3rd Edition.
10. Management of Organizational behavior – Harsey, Paul & Kenneth H. Blancher; PHI.
11. Organizational Behaviour: Human Behaviour at Work - Davis and Newstrom, TataMcGraw-Hill.

Teaching-Learning Process:

The teaching-learning process may be interactive classroom sessions with the help of PowerPoint presentations, reflective assessments, and case study discussions to ensure active participation and continuous learning.

Assessment Methods:

Internal Examinations (30 marks): Internal assessment may be conducted by using any one or in combinations of Class participation, Presentation, Project writing, Case studies, Assignments, and Surprise tests as suitable.

External Examination (70 Marks): End Semester Written Examination, duration 4 hours.

MULTIDISCIPLINARY COURSE – 1

Course Name: To be chosen from the pool
Course Code:

Course Type: MD (Theoretical)	Course Details: MDC-1			L-T-P: 2-1-0	
Credit: 3	Full Marks: 50	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
		0	15	0	35

ABILITY ENHANCEMENT COURSE -1

Course Name: English Communication
Course Code: AECE101

Course Type: AE (Theoretical)	Course Details: AEC-1			L-T-P: 4-0-0	
Credit: 4	Full Marks: 50	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
		0	15	0	35

SKILL ENHANCEMENT COURSE -1

Course Name: Computer Fundamentals, IoT, and AI
Course Code: BBAHMSE101

Course Type: SE (Theoretical)	Course Details: SEC-1			L-T-P: 2-1-0	
Credit: 3	Full Marks: 50	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
		0	15	0	35

Course Objective:

Computer fundamentals are an essential part of learning, everyone should know to operate computers. It gives students an in-depth understanding of the use of computers in business, society, and education. The introduction of computing devices, reinforcement of computer vocabulary, computer hardware and software, the internet, networking, and mobile computing. Provides hands-on training on Microsoft Office applications-mainly on Word, Excel, and PowerPoint, and enhancement of advanced skills. The effect of technology (AI) on society and its operations is varied. Healthcare workers that are knowledgeable about AI are needed to enable interactive and illustrative AI and assure the caliber of AI-based systems to boost patient safety. For those involved in decision-making, purchasing, and implementing AI-based systems, knowledge of AI is also crucial. The course gives an introduction to artificial intelligence (AI) and its use in the healthcare industry.

Learning Outcomes

1. Describe the usage of computers and why computers are essential components in business and society, utilize the Internet Web resources and evaluate online e-business systems.
2. Solve common business problems using appropriate Information Technology applications and systems.
3. Identify categories of programs, system software, and applications. Organize and work with files and folders, describe various types of networks network standards, and communication software.
4. Internet of Things (IoT) applications in day-to-day activities, Medical IoT applications.
5. An idea on IoT uses in hospital operations, patient satisfaction, and continuous monitoring for diagnosis, treatment, and effective utilization of resources.
6. Describe several AI techniques, including their advantages and disadvantages, for the creation of AI applications in healthcare, and compare and choose the most appropriate AI techniques.
7. Reason about legal conditions and ethical challenges in AI, think about the challenges and motivating elements for using AI-based solutions in the healthcare industry.

Unit 1. **Introduction to Computer:** Computer Characteristics, Concept of Hardware, Software, Evolution of Computer and Generations, Types of Computer – Analog and Digital Computers, Hybrid Computers, General Purpose, and Special Purpose Computer, Limitations of Computer Applications of Computer in Various Fields.
Structure and Working of Computer: Functional Block Diagram of Computer. CPU, ALU, Memory Unit, Bus Structure of Digital Computer – Address, Data, and Control Bus.
Input/Output Devices: Input Device – Keyboard, Mouse, Scanner, MICR, OMR. Output Devices – VDU, Printers-Dot Matrix, Daisy-wheel, Inkjet, Laser, Line Printers, and Plotters.

Unit 2. Computer Memory: Memory Concept, Memory Cell, Memory Organisation, Semiconductor Memory – RAM, ROM, PROM, EPROM, Secondary Storage Devices – Magnetic Tape, Magnetic Disk (Floppy Disk and Hard Disk.), Compact Disk.
Computer Language and Software: Algorithm, Flowcharts, Machine Language, Assembly Language, High-Level Language, Assembler, Compiler, Interpreter. Characteristics of Good Language. Software – System and Application Software.
Operating System: Operating System, Evolution of Operating System. Functions of Operating System. Types of Operating Systems. Detailed Study of Windows Operating System. Introduction and Features of LINUX OS.

Unit 3. Introduction to IoT: IOT concepts, IoT Standards, Components of IoT, Relevance of IoT for the future, IoT Applications in Health care system, Challenges in IoT implementation.
Cloud Platforms for IoT: Virtualization concepts and Cloud Architecture, Cloud computing, benefits, Cloud services — SaaS, PaaS, IaaS, Cloud providers & offerings, Study of IoT Cloud platforms.

Unit 4. Introduction to AI: Definition, Advantages of AI, Application areas of AI, Brief history of AI, Supervised, Un-supervised, and Semi-supervised learning, Introduction to pandas, Data visualization with pandas, Neural network, ANN, Applications of ANN, Deep learning, Pattern recognition, Interactive process mining.
Use of ChatGPT, Google Bard, Grammarly, QuillBot, Slide-making AI, AI for documents, Canva, Chat Bot, etc.

Unit 5. IoT &AI in Healthcare: Use of IoT in the healthcare field, the introduction of WSN, RFID, Ambient Assisted Living (AAM), Adverse Drug Reaction (ADR), Embedded Context Prediction (ECP), Wearable Device Access (WDA), Sematic Medical Access (SMA), Smart Dust in brief in the healthcare context.
AI for medical image analysis and imaging, AI for data analysis and data mining, Future applications and techniques, and Ethical and data protection issues in AI-based solutions.
Project: Breast cancer detection project, Diagnosing Coronary Artery Disease Project.

Unit 6. Microsoft Office: Document, Excel, PowerPoint- principles, and practices for the professional world; AI tools integrated with Microsoft-Office- popular Practices.

Suggested Readings

1. Healthcare and Artificial Intelligence, Published by: Cédric Villani, Bernard Nordlinger, and Daniela Rus, 2020, ISBN: 3030321606, Springer.
2. Artificial Intelligence in Healthcare; edited by Adam Bohr & KavehMemarzadeh, Published by Academic Press, 2020, ISBN: 0128184388.
3. Artificial Intelligence in Healthcare; authored & published by: Parag Suresh Mahajan, 2nd Edition, 2019, ISBN: 9353115574.
4. Machine Learning and the Internet of Medical Things in Healthcare, edited by Krishna Kant Singh, Mohamed Elhoseni, AkanshaSinga, Ahmed A. Elngar, 2021, Published by Academic Press, ISBN-978-0-12-821229-5, https://doi.org/10.1016/C2019-0-03077-4
5. Deep Learning and IoT in Healthcare Systems: Paradigms and Applications edited by Krishna Kant Singh, Akansha Singh, Jenn-Wei Lin, Ahmed A. Elngar, 1st Edition, 2021, Published by Apple Academic Press (Taylor & Francis), ebook ISBN: 9781003055082https://doi.org/10.1201/9781003055082
6. A Guide to Artificial Intelligence in Healthcare by Dr. BertalanMeskó, 2019, The Medical Futurist.
7. Internet of Things and its Applications by Prof. Satish Jain & Shashi Singh, 2020, BPB Publications.
8. Fundamentals of Computers by Er. Meera Goyal & Sushil Kumar Maurya, 2021, SBPD Publishers.

9. Fundamental of Computers by Prof. Sarita Dhawale&Thankur Akash Ashok, ISBN: 978-81-932613-1-6, Thakur Publications Pvt. Ltd., Pune.
10. Advance Excel 2019 Training Guide: Tips and Tricks To Quick Start Your Excel Skills by Manish Nigam, 2019, BPB Publishers.
11. Microsoft Office 2019 for Dummies by Wallace Wang, 2018, Wiley.
12. BPB's Computer Course Windows 10 with MS Office 2016 by Prof. Satish Jain, 2018, BPB Publishers.

Teaching Learning Process

The teaching-learning process may be interactive classroom sessions with the help of PowerPoint presentations, reflective assessments, and case study discussions to ensure active participation and continuous learning.

Assessment Methods

Internal Examination (15 Marks): Internal Assessment may be conducted by using any one or in combinations of Class participation, Presentation, Project Writing, Presentation, Assignment, Presentation, or Surprise Test as suitable.

External Examination (35Marks): End Semester Written Examination, Duration: 2 Hours.

SEMESTER- II

MAJOR COURSE - 2

Course Name: Medical Terminology
Course Code: BBAHMMJ201

Course Type: MAJOR (Theoretical)	Course Details: MJC-2			L-T-P: 4-1-0	
Credit: 5	Full Marks: 100	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
		0	30	0	70

Course Objective: The course consists of all types of medical terminology, prefix, suffix, and root of terms related to anatomy, physiology, and diseases of the human body. This subject focuses on elementary anatomy and physiology of the human body, main systems, symptomatic and diagnostic terms, operative terms, abbreviations, and common diseases.

Learning Outcome: After completion of the course learners can

1. Memorize medical terms, define diseases and symptoms, read and describe the prescription.

2. Learn human anatomy and physiology from the organ and system level.

3. Understand diseases, symptoms, abbreviations, and prescription terminology related to each system and specialization.

4. Evaluate hospital equipment procurements, works, and maintenance.

5. Categories different diagnostic equipment, its works, quality, and energy efficiency.

Unit 1. Medical Terminology- Definition, basic word structure- roots, prefix, suffix; Source of medical words; basic prefixes, suffixes, and roots; terminology related to colours, location, numbers, amount, positions; common abbreviations used in prescription.

Unit 2. Cell, the structure of the cell, cell division; Overview of Human Anatomy and Body Systems; Tissues, Organs, Anatomical Terminology, and directional terms; Introduction to Body Planes and Cavities.

Unit 3. Musculoskeletal System: Overview, Structure, and Functions of Bone & Joints, Structure and Function of Muscles; Structure & Functions of Integumentary System- Skin, hair, and nails; Cardiovascular System- Heart, Blood, and Lymphatic Systems; Nervous System- central and peripheral; Digestive System; Endocrine System; Respiratory System; Sense Organs; Excretory System; Reproductive System- male and female.

Unit 4. Common diseases and operative terms related to human body systems: Musculoskeletal system, Integumentary system, Cardiovascular system, Blood and Lymphatic system, Nervous system, basic terms related to Psychiatry, Digestive system, Endocrine system, Respiratory system, Sensory system, Excretory system, Reproductive system, basic terms related to Oncology.

Unit 5. Pharmacology- Definition, Drugs- definition, chemical, generic, and brand name; Classification of drugs with examples.

Unit 6. Medical Transcription overview, understanding the importance of accuracy, confidentiality, and professionalism in transcription; formatting and proofreading skills and techniques; overview of documentation standards as per HIPAA and NABH; transcription equipment and software.

Suggested Readings:

1. Paramedics 6-in-1 Handbook by GD Mogli, 2nd Edition, Jaypee Brothers Medical Publishers (p) Ltd.
2. Human Physiology, Volume 1 and 2 by Dr. C. C. Chatterjee
3. Medical Terminology Workbook by M. Mastenbjork and S. Meloni, Medical Creations.
4. Textbook of Physiology by P. Sathya and Viji Devanand, by CBS Publishers & Distributors Pvt. Ltd.
5. Handbook of General Anatomy by BD Chaurasia, 5th Edition, CBS Publishers &Distributord Pvt. Ltd.
6. Textbook of Anatomy and Physiology for Nurses by PR Ashalatha and G. Deepa, 5th Edition, JAYPEE.
7. Medical Terminology Simplified by Barbara A. Gylys and Regina M. Masters, E.A. Davis Company, Philadelphia.
8. Medical Terminology Express by Barbara A. Gylys, Regina M. Masters, E.A. Davis Company, Philadelphia.

Teaching-Learning Process:

The teaching-learning process may be interactive classroom sessions with the help of PowerPoint presentations, reflective assessments, audio-visuals, and case discussions to ensure active participation and continuous learning.

Assessment Methods:

Internal Examinations (30 marks): Internal assessment may be conducted by using any one or in combinations of Class participation, Presentation, Project writing, Assignments, and Surprise tests as suitable.
External Examination (70 Marks): End Semester Written Examination, duration 4 hours.

MINOR COURSE -2

Course Name: Bio-Statistics
Course Code: BBAHMMN201

Course Type: **Minor (Theoretical)**	Course Details: **MNC-2**			L-T-P: **4-1-0**	
Credit: **5**	Full Marks: **100**	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
		0	**30**	**0**	**70**

Course Objective: The objective of the "Bio-Statistics" course is to equip students with the foundational knowledge and analytical skills needed to effectively apply statistical methods to biological and medical data. The course aims to provide students with a solid understanding of statistical concepts, techniques, and their relevance in designing experiments, analyzing data, and drawing meaningful conclusions in the fields of biology, medicine, and related disciplines.

Learning Outcome:
By the end of this course, students should be able to:

1. Understand Statistical Concepts: Demonstrate a clear understanding of fundamental statistical concepts, including variables, data types, measures of central tendency, and variability.
2. Select Appropriate Statistical Methods: Identify and select appropriate statistical methods for analyzing different types of biological and medical data, considering factors such as data distribution and research objectives.
3. Design Experiments: Design experiments and studies with appropriate sampling techniques, sample size determination, and randomization to ensure valid and reliable results.
4. Interpret Results: Interpret statistical results in the context of biological and medical research questions, drawing valid conclusions and avoiding misinterpretations.
5. Handle Missing Data and Outliers: Address issues related to missing data and outliers, selecting appropriate techniques for imputation and outlier detection.
6. Communicate Results: Communicate statistical findings effectively through written reports, graphical representations, and presentations, targeting both technical and non-technical audiences.
7. Collaborate in Research Teams: Collaborate effectively within research teams, contributing statistical expertise to interdisciplinary projects and promoting effective data-driven decision-making.

Unit 1. Definition of Statistics and Bio-Statistics, importance and scope of statistics, limitations of Statistics; Types of data, important sources of secondary data; Collection and presentation of Data: different methods of collecting primary data: Tabular and graphical methods of data presentation; Frequency distribution; Diagrammatic presentation of frequency data: Line chart, Bar chart, Pie diagram, Histogram, Frequency polygon, Ogive.

Unit 2. Measures of Central Tendency: Simple and Weighted Arithmetic Mean – Properties, Merits, and Demerits; Geometric Mean and Harmonic Mean, Relationship among A.M., G.M., and H.M; Median and Mode – Measures, Properties, Merits, and Demerits.

Unit 3. Measures of Dispersion: Range, Standard Deviation, Mean Absolute Deviation, Quartile Deviation – their Properties, Merits, and Demerits; Relative Measures.
Concepts of Skewness and Kurtosis, Different Measures of Skewness and Kurtosis.

Unit 4. Concept of Correlation and Regression; Scatter Diagram; Pearson's Correlation Coefficient and its Properties; Spearman's Rank Correlation (in case of without tie); Simple Regression and its properties.
Vital Statistics: Measurement of Mortality, Measurement of Fertility, and Measurement of Population Growth.

Unit 5. Theory of Probability and Distributions: Concept and Important definition; Classical, Additive, Multiplicative and Conditional Theorem of Probability; student's t-test (including paired t-test), Goodness of fit and independence of attributes through Chi-square test.

Suggested Readings:

1. Statistical Methods by N.G Das (Vol I and II), McGraw Hill Education (India) Pvt. Ltd.
2. Mahajan's Methods in Biostatistics by Bratati Banerjee, 9th Edition, Jaypee Brothers.
3. Principles of Biostatistics by Marcello Pagano, Kimberlee Gauvreau, 2nd Edition, CRC Press.
4. Elements of Health Statistics by N.S.N Rao, Tara Publications.
5. A First Course in Probability by Sheldon Ross, 10th Edition, 2022, Pearson.
6. Fundamental of Statistics (vol. 1 and 2): Goon, Gupta and Dasgupta, World Press.
7. Fundamentals of Mathematical Statistics by S.C Gupta, V.K. Kapoor, 12th Edition, 2020, Sultan Chand and Sons.

Teaching-Learning Process:

The teaching-learning process may be interactive classroom sessions with the help of PowerPoint presentations, reflective assessments, and case study discussions to ensure active participation and continuous learning.

Assessment Methods:

Internal Examinations (30 marks): Internal assessment may be conducted by using any one or in combinations of Class participation, Presentation, Project writing, Case studies, Assignments, and Surprise tests as suitable.

External Examination (70 Marks): End Semester Written Examination, duration 4 hours.

Multidisciplinary Course-2

Course Name: To be chosen from the pool
Course Code:

Course Type: **MD (Theoretical)**	Course Details: **MDC-2**			L-T-P: **3-0-0**	
Credit: **3**	Full Marks: **50**	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
		0	**15**	**0**	**35**

VALUE ADDED COURSES - 1

Course Name: Environment Studies
Course Code: VA201

Course Type: **VA**	Course Details: **VAC-1**			L-T-P: **4-0-0**	
Credit: **4**	Full Marks: **50**	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
		0	**15**	**0**	**35**

SKILL ENHANCEMENT COURSE-1

Course Name: Diagnostic Techniques in Healthcare
Course Code: BBAHMSE201

Course Type: **SE** **(Theoretical)**	Course Details: **SEC-2**			L-T-P: **3-0-0**	
Credit: **3**	Full Marks: **50**	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
		0	**15**	**0**	**35**

Course Objective: The Diagnosis Techniques in Healthcare course provides a comprehensive understanding of various diagnostic techniques used in healthcare settings. It covers a wide range of diagnostic methods, including physical examination, laboratory tests, imaging, and specialized diagnostic procedures. This course aims to equip students with the knowledge and skills necessary to interpret diagnostic results, understand their clinical significance, and contribute to effective patient care and treatment planning.

Learning Outcome:
By the end of the Diagnosis Techniques in Healthcare course, students should be able to:
1. Understand the importance of accurate diagnosis in healthcare and the role of diagnostic techniques in patient care.
2. Demonstrate knowledge of various diagnostic methods, including history taking, physical examination, laboratory tests, imaging techniques, and specialized diagnostic procedures.
3. Apply appropriate techniques for gathering patient history and conducting a comprehensive physical examination.
4. Interpret laboratory diagnostic tests, including hematological, clinical chemistry, and microbiological tests.
5. Evaluate imaging techniques for diagnostic purposes.
6. Understand the principles and applications of genetic and molecular diagnostic techniques in disease diagnosis.
7. Interpret diagnostic results in specialty areas.
8. Understand the role of biopsies, pathology, and histology in the diagnostic process.
9. Stay updated with emerging diagnostic technologies and future trends in healthcare.
10. Apply critical thinking skills to assess diagnostic information and contribute to effective patient care and treatment planning.
11. Communicate and collaborate effectively with healthcare professionals, patients, and their families regarding diagnostic procedures and results.

Unit 1. Introduction to diagnostic techniques- the importance of accurate diagnostic techniques in healthcare, history of diagnostic techniques and tools in brief; patient history and documentation- components of a comprehensive physical examination- communication with the patient, confidentiality.

Unit 2. Blood test and hematology- Hemoglobin, Complete blood count (CBC), Blood typing and cross-matching, haemostasis and coagulation test; Clinical chemistry- Liver and Kidney function tests, cardiac enzymes, markers & lipid profile test. Endocrine function tests- Thyroid, Adrenal, and Diabetes related tests; Immunoglobulin and antibody tests- autoimmune disease markers, serological test for infectious disease.

Unit 3. Microbial cultural and sensitivity testing, molecular diagnosis (PCR, DNA sequencing), Identification of common pathogens; Urine test- physical, chemical, microscopic; Analysis of cerebrospinal fluid, pleural fluid, and ascetic fluid; Tumor markers for common type of cancers; Pregnancy related tests.

Unit 4. Common equipment and diagnostic techniques: X-Ray, CT, and PET (All type) Scan, MRI, ECG, EEG, USG, Infusion and Syringe pump, Anaesthesia machine/ Boyle's apparatus, Heart-lung machine, IABP, ABG analysis machine, USG Doppler, Echocardiography, PFT, Ventilator, Diathermy, Patient Monitor, Defibrillators, Hematology analyzer/ Cell counter, Biochemistry analyzer, ESU/ Cautery machine, Suction apparatus.

Unit 5. Sterilizer- Autoclave, ETO, Plasma; Bone densitometer, C-Arm machine, Cath lab, Pacemaker, Endoscopy, Colonoscopy, Arthroscopy, Bronchoscopy, IVF, Lithotripsy, Lung Function test, FNAC, FNAB, Gastroscope, Operating Instrument set, Oxygen concentrator, Pulsoxymeter, Robotic surgery.

Suggestive Readings:

1. Paramedics 6-in-1 Handbook by GD Mogli, 2nd Edition, Jaypee Brothers Medical Publishers (p) Ltd.
2. https://cdsco.gov.in/opencms/opencms/en/Medical-Device-Diagnostics/Medical-Device-Diagnostics/
3. Biomedical Equipment Management & Maintenance Program by National Health Mission, https://nhm.gov.in/index1.php?lang=1&level=3&sublinkid=1224&lid=586
4. Laboratory Equipments: Hospital Medical Equipments made Easy by R.K.V Murugan, 1st Edition, 2022, Notion Press.
5. Introduction to Biomedical Instrumentation and Its Applications by Sudip Paul et. Al., 2022, Academic Press.
6. Sonography Principles and Instruments by Frederick W. Kremkau, 10th Edition, 2020, Saunders.
7. Pocket Essential Medical Equipment by David Zhang and Norbert Banhidy, 1st Edition, 2022, CRC Press.

Teaching-Learning Process:

The teaching-learning process may be interactive classroom sessions with the help of PowerPoint presentations, reflective assessments, and case study discussions to ensure active participation and continuous learning.

Assessment Methods: Internal Examinations (15 marks): Internal assessment may be conducted by using any one or in combinations of Class participation, Presentation, Project writing, Case studies, Assignments, and Surprise tests as suitable.

External Examination (35 Marks): End Semester Written Examination, duration 2 hours.

VOCATIONAL COURSE - 1

Course Name : Vocational Course
Course Code : VC201

Course Type: **VC (Practical)**	Course Details: **VCC-1**			L-T-P: **0-0-8**	
Credit: 4	Full Marks: **50**	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
		30		**20**	

SUMMER INTERNSHIP - 1

Course Name : Summer Internship
Course Code : SI201

Course Type: **SI (Practical)**	Course Details: **SIC-1**			L-T-P: **0-0-8**	
Credit: 4	Full Marks: **50**	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
		30		**20**	

SEMESTER- III

MAJOR COURSE-3

Course Name: Hospital Operation Management- II
Course Code: BBAHMMJ301

Course Type: **Major (Theoretical)**	Course Details: **MJC-3**			L-T-P: **4-1-0**	
Credit: **5**	Full Marks: **100**	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
		0	**30**	**0**	**70**

Course Objective:

The subject focuses on the planning of the hospital and healthcare establishment, project management, and all clinical establishment and related planning inside a hospital. This course will facilitate the practical approach toward the planning, building, initiating, shakedown periods, and starting the operational phase of a hospital. For further clarity, the subject focuses on project management and related functions and tools. Clinical services provided by a tertiary-level hospital are described in the subject with brief clarity. i.e., location, physical facilities, equipment, manpower, and operational issues. Case studies and lectures from industry professionals are required to fulfill the objective of the course.

Learning Outcome: After completion of the course learners can

1. Identify the prerequisites to establish a hospital or healthcare facility.
2. Planning of a hospital, from blueprints to shakedown periods.
3. Outline the project management steps, describe its components, and solve mini-cases related to project management.
4. Categorize projects, manage teams, and estimate the project by cost-effective and cost-benefit analysis.
5. Describe different clinical services in a hospital.
6. Illustrate and demonstrate clinical services required for fully operational hospitals.
7. Dramatize different activities and argue on operations for clinical efficiency.
8. Categories Diagnostics and Allied Services available in the Hospital.
9. Illustrated and demonstrated Diagnostic services and its operations.
10. Develop and argue hospital clinical and diagnostic services' policies and processes.

Unit 1. Define Project, Project Management, Issues & Challenges; Project Life cycle; Project constraints; Project feasibility studies; Social CBA and CEA;

Project charter, Project Planning, and Scheduling- Gantt chart and other control charts, PERT and CPM analysis, float and slacks- concept, AOA and PDM/AON Network- overview; Project risks, procurement, stakeholder management; Project report writing- DPR;
Greenfield and Brownfield projects- overview. Agile and Lean project management- overview only.

Unit 2. Hospital planning- building blocks and ideas, site selection- terrain, climatological consideration; feasibility study for the hospital; Expression of Interest, Request for proposal; Detailed project report (DPR)- Hospital overview;
Designing and landscaping- flexibility, orientation, slope study. Plans- blueprints, master plan, different designing considerations- planning grid, schematic design, stack diagram; construction of building and commissioning shakedown period- documentation.

Unit 3. Interior planning- zoning, anthropometric aspects, structural and non-structural components- water, plumbing, electricity, environmental control- HVAC, flooring, windows, doors, surface materials, ceiling, ramps, stairs, lifts; and design considerations; Safety and security.

Unit 4. Future Hospitals- Holistic Concept and Approaches; Evidence-based design, Sustainable design, Designing Green Hospitals- process, LEED & ratings, Patient-focused hospital design & process, Modular Building Concepts, Autonomous Hospital, Smart Hospital concepts and e-Hospital; Case Study on Hospital Designing- any two Indian multi or super-specialty hospitals. MediCAB: Portable hospital in India- case Study.

Unit 5. Clinical services- Location, Design, equipment, resources allocation, and operations of - outpatient services including front office, OPD, Accident and Emergency, and Daycare Services; Inpatient services- nursing units- floor planning and management- Ward- Isolation- solarium; Intensive Care Unit (ICU)- CCU- HDU; Surgical Units – OT; LRDP Suits; Physical Medicine and Rehabilitation (PMR); Palliative care, Facilities for aged and specially-abled.

Unit 6. Location, Physical facilities, and equipment planning of diagnostic and therapeutic services- Laboratory, medical imaging, radiological services, sonography, equipment used, advanced imaging services. NABL and AERB in brief; Medical Gases; Blood bank and Transfusion Services; Pharmacy services;
Advanced facilities- Dialysis unit, Burn unit, IVF facilities, Cancer hospital- Radiotherapy unit-nuclear medicine unit, Psychiatry units, Telemedicine, Cyber Security & patient safety, Robotic surgery, automated and AI-assisted facilities.

Suggested Readings:

1. Fundamentals of Project Management by Joseph Heagney, 6th Edition, 2022, HarperCollins Leadership.
2. Project Management by Pradeep Pai, 2019, Pearson India.
3. Construction Management of Healthcare Projects by Sanjiv Gokhale & Thomas Gormley, 1st Edition, 2014, McGraw Hill.
4. The Fast Forward MBA in Project Management by Eric Verzuh, 6th Edition, 2021, Wiley.
5. Innovations in Hospica Architecture by Stephen Verderber & Ben J. Refuerzo, Taylor and Francis, 2006.

6. Step by Step Hospital Designing and Planning by Sangeet Sharma, 2nd Edition, Jaypee, 2010.
7. Hospitals and Nursing Homes: Planning, Organization, and Management by Syed Amin Tabish, 2nd Edition, Jaypee, 2022.
8. Planning and Designing of Speciality Health Care Facilities by R. Chandrashekhar, Shakti Kumar Gupta, Sunil Kant, 1st Edition, Jaypee, 2021.
9. Hospitals- Facilities Planning and Management by G. D. Kunders, McGraw Hill Education, 2017.
10. Hospital Architecture (Architecture in Focus) by Christine Nickl-Weller, Thames and Hudson, 2012.
11. Hospital Administration by D.C Joshi, Mamta Joshi, 2nd Edition, Jaypee Brothers Medical Publisher, 2022.
12. Hospitals and Medical Facilities: Construction and Design Manual by Philipp Meuser & Franz Labryga, DOM Publishers, 2019.
13. Manual for Hospital Planning and Designing: For Medical Administrators, Architects, and Planners by Ajay Garg & Anil Dewan, Springer Verlag, Singapore, 2022.
14. Airborne Infection Control Guide to Planning and Designing Hospital by Pervez Ahmed, Jaypee Brothers Medical Publisher, 2021.
15. Planning, Designing, and Construction of Health Care Facilities by Joint Commission Resources, Edited by Carolyn Schierhorn, 4th Edition, 2020, Joint Commission Resources.
16. NABH Accreditation Standards for Hospitals April 2020, 5th Edition, ISBN: 978-81-944-8776-0.
17. Hospital Pharmacy by H.P Tipnis, 2019, Career Publications.
18. Concise Textbook on Hospital Management & Patient Care in Diagnostic Radiology by N.K. Kardam and Lalit Agarwal, 2021, JBD Publications.
19. Essentials of Blood Banking and Transfusion Medicine By Ganga S. Pilli, 2021, CBS Publishers and Distributors Pvt Ltd.

Teaching-Learning Process:

The teaching-learning process may be interactive classroom sessions with the help of PowerPoint presentations, reflective assessments, industry visits, workshops, and case study discussions to ensure active participation and continuous learning.

Assessment Methods:

Internal Examinations (30 marks): Internal assessment may be conducted by using any one or in combinations of Class participation, Presentation, Project writing, Case studies, Assignments, and Surprise tests as suitable.
External Examination (70 Marks): End Semester Written Examination.

MAJOR COURSE-4

Course Name: Community Health, Epidemiology and Hospitals
Course Code: BBAHMMJ302

Course Type: **Major (Theoretical)**	Course Details: **MJC-4**			L-T-P: **4-1-0**	
Credit: **5**	Full Marks: **100**	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
		0	**30**	**0**	**70**

Course Objective: To provide students with a comprehensive understanding of community health, epidemiology, and hospitals, and their role in promoting population health and healthcare delivery.

Learning Outcomes:

1. Knowledge and Understanding:
   - Define and explain the concepts of community health and epidemiology.
   - Identify the determinants of health and their impact on community health outcomes.
   - Describe the healthcare delivery system, including the role of hospitals in providing healthcare services.
   - Understand the principles and methods of epidemiology for studying diseases in populations.
2. Comprehension and Application:
   - Analyze the social, economic, and environmental factors influencing community health.
   - Apply epidemiological principles and methods to investigate and assess health issues in a community.
   - Evaluate the effectiveness of health promotion and disease prevention strategies in a community setting.
   - Examine the role of hospitals in delivering primary, secondary, and tertiary healthcare services.
3. Analysis and Evaluation:
   - Critically analyze the strengths and weaknesses of national health programs in addressing community health needs.
   - Evaluate the impact of health education and behavior change interventions on community health outcomes.
   - Assess the effectiveness of environmental health policies and occupational health programs in protecting community health.
   - Analyze and interpret epidemiological data to inform public health decision-making.
4. Synthesis and Creation:
   - Develop community health assessment plans and research proposals.
   - Design and implement health promotion campaigns targeting specific community health issues.
   - Formulate strategies to improve healthcare access and quality in underserved communities.
   - Propose evidence-based interventions for disease prevention and control in a community setting.
5. Ethical and Professional Conduct:
   - Demonstrate ethical practices in community health research and data collection.
   - Exhibit professionalism and cultural sensitivity in engaging with diverse communities.

- Apply ethical principles to address issues related to privacy, confidentiality, and informed consent in community health settings.
- Recognize and respect the rights and autonomy of individuals and communities in healthcare decision-making.

Unit 1. Concept of Disease- the concept of causation- Natural history of disease; concept of control; concept and modes of prevention and intervention; Introduction to public health- health promotion and disease prevention strategies; Primary Healthcare and its components; Sub-Unit- PHC- CHC; Water- Air- Housing and Sanitation quality.

Unit 2. Definition and concept of Epidemiology, Basic measurements and tools; Incidence and Prevalence- measures of disease frequency, use of routine, vital, and health statistics; Epidemiological methods- Observational, Experimental, and Analytical (Overview only); Case study- Doll and Hill's studies on smoking and lung cancer, Framingham Study.

Unit 3. Dynamics of disease transmission- mode of transmission, Host defenses, immunity, vaccines and immunoglobulins (basic knowledge)- cold chain- Universal Immunization Programme; Community health- healthcare delivery system of India- Central, State, District, and Panchayati raj level; Few National Health Programmes- National Health Mission, AB-PMJAY, RMNCH+A, NACP, NVBDCP, PMSMA, NPCDCS, and NPCB&VI.

Unit 4. Epidemiology of Communicable Diseases- Influenza, Food Poisoning, Tetanus, AIDS, Rabies; Epidemiology of Non-communicable Diseases- Hypertension, Cancer, Diabetes, Cardiovascular Diseases, Mental Health Disorders.

Unit 5. Infection control- community level; basic hygiene practices for disease prevention- community level; Hospital Acquired Infection Control- infection control committee- prevention and management; Hospital Risk Management- patient safety and care; Occupational Safety in Hospital; Biomedical Waste Management in Hospital- BMW Rule 2016- identification, segregation, packaging, transportation, storage, treatment, and disposal.

Unit 6. Disaster- types, mitigation, and management; Disaster management in Hospitals- Hospital Emergency Incident Command System- mitigation and Disaster Triage System; Internal Disaster- Various codes and commands in emergency in Hospitals- hospital security. Fire safety in Hospitals- types of fire- fire extinguishers- fire management system in hospitals- alarm, exit, safety, and engineering system.

Suggestive Readings:

1. Text Book on Preventive and Social Medicine by K. Park, 27th Edition, 2023, Banarshidas Bhanot Publisher.
2. Definition Handbook of Community Medicine by Dr. Rijul Ranjan, Bluerose Publishers Pvt. Ltd.
3. DK Taneja's Health Policies and Programmes in India by Bratati Banerjee, 17th Edition, 2022, Jaypee Brothers Med Pvt Ltd.

4. IAPSM's Textbook of Community Medicine by AM Kadri et al., 3rd Edition, 2024, Jaypee Brothers Medical Publishers (P) Ltd.
5. A Comprehensive Textbook on Community Health Nursing by Bijayalaskhmi Dash, 2nd Edition, 2023, Jaypee Brothers Medical Publishers (P) Ltd.
6. Review of Preventive and Social Medicine (Including Biostatistics) by Vivek Jain, 15th Edition, 2023, Jaypee Brothers.
7. Hospital Administration by DC Joshi and Mamta Joshi, 2nd Edition, Jaypee Brothers Medical Publishers.
8. Disaster Management for Health Care Professionals by Joshi Sonopant G, Jaypee Brothers Medical Publishers.
9. Hospital Hazards and Disaster Management by Prof. Muhammadu Sathik Raja, 2024, Academic Guru Publishing House.
10. A Manual of Fire Prevention and Fire Protection for Hospitals by Otto Robert Eichel, 2023, Legare Street Press.

Teaching-Learning Process:
The teaching-learning process may be interactive classroom sessions with the help of PowerPoint presentations, reflective assessments, industry visits, workshops, and case study discussions to ensure active participation and continuous learning.

Assessment Methods:
Internal Examinations (30 marks): Internal assessment may be conducted by using any one or in combinations of Class participation, Presentation, Project writing, Case studies, Assignments, and Surprise tests as suitable.
External Examination (70 Marks): End Semester Written Examination.

MINOR COURSE-3

Course Name: Business Environment
Course Code: BBAHMMN301

Course Type: **Minor (Theoretical)**	Course Details: **MNC-3**			L-T-P: **4-1-0**	
Credit: **5**	Full Marks: **100**	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
		0	**30**	**0**	**70**

Course Objective:
To provide students pursuing hospital management with a comprehensive understanding of the business environment in the healthcare industry, enabling them to analyze and adapt to the dynamic factors that influence healthcare organizations.

Learning Outcomes:
1. Knowledge:
- Define the concept of the business environment in the context of the healthcare industry.
- Identify and describe the key components of the healthcare business environment, including economic, social, legal, technological, and political factors.
- Explain the interrelationships between various elements of the business environment and their impact on healthcare organizations.

2. Comprehension:
- Interpret the implications of different economic trends and policies on hospital management decision-making.
- Analyze the social and demographic factors influencing healthcare service demand and delivery.
- Understand the legal and regulatory framework governing healthcare organizations and their implications for management practices.
- Discuss the impact of emerging technologies and innovations on healthcare operations and service delivery.

3. Application:
- Evaluate the opportunities and challenges arising from the business environment in the healthcare industry.
- Apply strategic management concepts to develop business strategies that align with the prevailing healthcare business environment.
- Propose adaptive measures to mitigate risks and capitalize on opportunities presented by the changing healthcare landscape.
- Analyze case studies and real-world scenarios to identify appropriate business responses to environmental factors.

4. Analysis:
- Analyze the competitive forces within the healthcare industry and assess their impact on hospital management.
- Evaluate the strengths, weaknesses, opportunities, and threats (SWOT) of healthcare organizations concerning the business environment.

- Assess the impact of governmental policies, regulations, and reforms on healthcare organizations and their strategic decision-making.

5. Synthesis:
   - Develop innovative approaches to leverage emerging technologies and trends to improve healthcare service delivery and organizational performance.
   - Formulate strategies to address challenges posed by the business environment, such as changing patient expectations, cost constraints, and competition.
   - Design contingency plans to respond to potential disruptions or changes in the healthcare business environment.
   - Integrate knowledge from various aspects of the business environment to propose comprehensive business strategies for healthcare organizations.
6. Evaluation:
   - Critically evaluate the effectiveness of different management approaches in adapting to the business environment in the healthcare industry.
   - Assess the ethical and social implications of business decisions made in response to environmental factors.
   - Appraise the impact of healthcare business environment factors on financial performance, patient satisfaction, and quality of care in healthcare organizations.
   - Critique and recommend improvements to existing healthcare management practices based on an understanding of the business environment.

Unit 1. Concept, nature, and importance of business and business environment – Types of the environment; general and task environment, internal and external environment, Basic elements of environment: socio-cultural, political, legal, economic, and technological elements with case studies. Business environment scanning and analysis- methods and applications; PESTEL, SWOT, and Competitors analysis.

Unit 2. **Economic Environment**: Concept, types- systems- Capitalist, Socialist, and Mixed; Macroeconomic Indicators- GDP, Inflation, Unemployment, Interest rates, Foreign exchange reserves, income distribution, infrastructure; Economic Policies- Fiscal, Monetary, and Trade. **Global economic environment**- LPG and its impact on Indian Business Economy; EXIM Policy of India, MNC, and Foreign Investments- Strategies for entering into foreign market; most favored nations (MFN), SEZ and its impact.

Unit 3. **Legal and Regulatory Framework**- overview, impact on business with case studies; Consumer Protection Act 1986; Companies Act 2013- salient features, corporate governance, corporate social responsibilities, types of companies, structure of the companies, MOA & AOA, Meetings; The West Bengal Clinical Establishment (Registration, Regulation, and Transparency) Act, 2017;
Intellectual Property Rights and its significance; Insurance and Tax; OECD, GATT-WTO, NAFTA, World Bank, Conflict resolution, dispute settlements, and litigation.

Unit 4. **Socio-cultural environment:** Society and groups, family and society- lifestyle, life cycle, social theory of risk perception, traditional values & modernization, impact of social environment on business;

Concept and nature of culture – Impact of culture on business – cultural resources – Culture as a change agent, Hall's map of culture, analysis, adaptation, and conflict, cross-cultural analysis; Ethics and social responsibility of business – Arguments for and against social responsibility.

Unit 5. Technological environment: Understanding technology- technology transfer, Schumacher movements & appropriate technology; Technological hazards, VUCA world and changes in technology, Industry 4.0 and 5.0- concept, Case study.
Impact of Business Environment in Healthcare: Global Health Trends and Challenges, the Role of WHO, Patient Rights and Healthcare Ethics- values, and cultural issues- abortion, euthanasia; Healthcare budgeting and financing- Pricing issues, insurance concept, economic impacts on healthcare.

Suggestive Readings:

1. Taxmann's Business Environment: The Essential Economic System by Prof. (Dr.) Satya P. Das, prof. (dr.) J. K. Goyal, Prof. (dr.) Dipti Kakar, March 2024, Taxmann Publications Pvt. Ltd.
2. Business Environment by K. Chidambaram and V. Alagappan, First Edition, 2021, S.Chand.
3. Business Environment: Text and Cases by Justin Paul, 4th edition, 2018, McGraw Hill Education.
4. Business Environment by Dr. C. B. Gupta, 2022, Sultan Chand and Sons.
5. Essentials of Business Environment (Text, Cases & Exercises) by K. Aswathappa, 16th Edition, Himalaya Publishing House.
6. Business Environment by B.S. Raman and Y. S. Ganesh, 2022, Chethana Book House.
7. Business Environment by B.N. Ghosh, 2014, Oxford University Press.
8. Business Environment: Text and Cases by Francis Cherunilam, 30th Edition, Himalaya Publishing House.
9. Economic Environment of Business by Nair, Banerjee, and Agarwal, 2019, Pragati Prakashan.
10. International Business in VUCA World by Rob Van Tulder, Alain Verbeke, and Barbara Jankowska, 2019, Emerald Publishing.

Teaching-Learning Process:

The teaching-learning process may be interactive classroom sessions with the help of PowerPoint presentations, reflective assessments, industry visits, workshops, and case study discussions to ensure active participation and continuous learning.

Assessment Methods:

Internal Examinations (30 marks): Internal assessment may be conducted by using any one or in combinations of Class participation, Presentation, Project writing, Case studies, Assignments, and Surprise tests as suitable.
External Examination (70 Marks): End Semester Written Examination.

MULTIDISIPLINARY COURSE- 3

Course Name: To be chosen from the pool
Course Code:

Course Type**: MD (Theoretical)**	Course Details: **MD-3**			L-T-P: **2-1-0**	
Credit: **3**	Full Marks: **50**	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
		0	**15**	**0**	**35**

ABILITY ENHANCEMENT COURSE - 2

Course Name: English Communication
Course Code: AECE301

Course Type: **AE** **(Theoretical)**	Course Details: **AEC-2**			L-T-P: **4-0-0**	
Credit: **4**	Full Marks: **50**	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
		0	**15**	**0**	**35**

SEMESTER IV

MAJOR COURSE -5

Course Name: Hospital Operation Management- III
Course Code: BBAHMMJ401

Course Type: **Major (Theoretical)**	Course Details: **MJC-5**			L-T-P: **4-1-0**	
Credit: **5**	Full Marks: **100**	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
		0	**30**	0	**70**

Course Objective: Modern hospitals follow the patient-centric approach with high values. The course objective for Hospital Operation Management- III is to provide students with an understanding of the various supportive and utility services and systems that are essential for the functioning of a hospital, with a focus on patient-centric care. The course is designed to meet the expectations of the hospital from the budding professionals to implement supportive and utility services towards patient-centric care, where the patient would participate in decision-making along with the healthcare facilitators. The various information technology-enabled facilities impart in the patient care system of a hospital at large is included in the course.

Learning Outcomes: The learning outcomes of Hospital Operation Management- III are

1. Study patient-centric management principles and how they can be applied in a hospital setting to improve patient satisfaction and quality of care.
2. Apply the principles of patient-centric management in improving patient satisfaction and quality of care, and to develop effective communication and collaboration within the hospital environment.
3. Understand the importance of support and utility services in a hospital setting and their role in ensuring efficient and effective patient care.
4. Learn about different types of support and utility services and their specific responsibilities and functions.
5. Analyze case studies and real-world examples of effective support and utility services and patient-centric management in hospitals.
6. Develop the skills and knowledge necessary to manage and improve support and utility services and management strategies in a hospital setting.
7. Understand how to use data and analytics to continuously improve the performance of support and utility services and the patient-centric approach.
8. Learn about the hospital's internal and governmental information services, use of online applications, and their role in healthcare.

Unit 1. The patient-centric approach of Modern Hospitals, Patient satisfaction, feedback system, VIP and emergency patient care, Grievance handling mechanism; Duties and responsibilities of

the Hospital Operations department, Skills required to utilize the patient-centric approach of the hospital, Documentation policies and SOP.

Unit 2. Supportive Services- meaning, importance, and types of supportive services in a hospital. Location, design, physical facilities and equipment, staffing, and functions of the following Supportive Services:

- CSSD
- Pharmacy
- Physical Medicine and Rehabilitation
- Telemedicine- NMC standards
- Insurance and TPA
- Medical Social Workers
- Hospital statistical services and health service data

Unit 3. Utility Services I- meaning, importance, and types of utility services in a hospital. Location, design, physical facilities and equipment, staffing, and functions of the following Utility services:

- Transport Services
- Mortuary Services
- Linen and Laundry Services
- Housekeeping
- Security Services

Unit 4. Utility Services-II: Location, design, physical facilities and equipment, staffing, and functions of the following Utility services

- Hospital engineering and maintenance services, HVAC
- Dietary services
- Hospital waste management
- Hospital store and supply

Unit 5. Software management and Hospital Information Systems: IT in healthcare; MIS; HIS and its components- Cloud-based healthcare management system (e.g., HINAI), IPD and OPD management system including booking, hospital store management system, Blood bank & transfusion management system (ROKTOKOSH), Vendor management applications, Government online portals like ABHA, Co-WIN, Aarogya Setu, etc.

Suggested Readings:

1. Hospital Supportive Services: Hospital Administration in the 21st Century by S.L Goel and R. Kumar, Deep & Deep Publications, 2004.
2. Patient Care Services and Hospitals by S. Porkodi, Excel Books, Latest Edition.
3. Hospital Supportive Services- Sangeetha Natarajan, Excel Books, Latest Edition.
4. Hospitals- facilities planning and management by G.D. Kunders, McGraw Hill Education, 2017.
5. Hospital Administration by DC Joshi, Mamta Joshi, 2nd Edition, Jaypee Brothers medical publishers, 2022.

6. Hospital Information System: A concise study by S. A. Kelkar, Prentice Hall India Learning Private Limited, 2010.
7. Management Information System by K.C Laudon and Jane P. Laudon, 7th Edition, Pearson India, 2022.
8. Managing a CSSD: A Personal Perspective by Joan M. Losper, Kindle Edition, 2021.
9. Hospital and Nursing Homes Planning, Organizations and Management by Syed Amin Tabish, 2nd Edition, Jaypee Brothers Medical Publishers, 2022.
10. Patient Centric Healthcare by Sanjay Rajpal, Kindle Edition, 2021.
11. Hospital Administration and Management: A Comprehensive Guide by Joydeep Das Gupta, 2nd Edition, 2015, Jaypee Brothers Medical Publishers.

Teaching-Learning Process:

The teaching-learning process may be interactive classroom sessions with the help of PowerPoint presentations, reflective assessments, industry visits, workshops, and case study discussions to ensure active participation and continuous learning.

Assessment Methods:

Internal Examinations (30 marks): Internal assessment may be conducted by using any one or in combinations of Class participation, Presentation, Project writing, Case studies, Assignments, and Surprise tests as suitable.
External Examination (70 Marks): End Semester Written Examination, duration 4 hours

MAJOR COURSE – 6

Course Name: Accounts and Financial Management in Hospitals
Course Code: BBAHMMJ402

<table>
<tr><td colspan="2">Course Type: Major (Theoretical)</td><td colspan="3">Course Details: MJC-6</td><td colspan="2">L-T-P: 4-1-0</td></tr>
<tr><td colspan="2" rowspan="3">Credit: 5</td><td rowspan="3">Full Marks: 100</td><td colspan="2">CA Marks</td><td colspan="2">ESE Marks</td></tr>
<tr><td>Practical</td><td>Theoretical</td><td>Practical</td><td>Theoretical</td></tr>
<tr><td>0</td><td>30</td><td>0</td><td>70</td></tr>
</table>

Course Objective: To provide students with a comprehensive understanding of the financial management of healthcare organizations. This includes topics such as basic accounting, revenue management, financial analysis, cost accounting, capital budgeting, materials control, etc. The course also focuses on the unique financial challenges faced by hospitals and other healthcare organizations, such as managing the cost of providing care to uninsured patients and navigating the complex regulations that govern healthcare financing. Ultimately, the goal of the course is to equip students with the knowledge and skills they need to effectively manage the financial operations of a healthcare organization and support decision-making that aligns with the organization's mission and strategic goals.

Learning Outcomes: The learning outcomes of the course are:

1. Recognizing and recalling key terms, concepts, and processes related to hospital accounting and financial management.
2. Explaining the purpose and function of various financial statements, such as the balance sheet and income statement, and how they are used to measure the financial performance of a hospital.
3. Using financial ratios and other analysis techniques to evaluate the financial health of a hospital.
4. Breaking down financial information to identify patterns and trends that can be used to make informed financial decisions.
5. Assessing the effectiveness of a hospital's financial management strategies and making recommendations for improvements.
6. Help to develop budgets, financial plans, and other financial management tools that can be used to guide the financial operations of a hospital.

Unit 1. Accounting: Business Transaction and Basic Terminology, Need to Study Accounting, Accounting functions, Purpose of Accounting Records, Accounting Principles – Concepts and Conventions, Accounting Equation.

Unit 2. Account Records: Principles of Double Entry System, Journal Entries, Ledger, Subsidiary Books – Cash, Sales & Purchase books, Components of Hospital Accounting; Financial Statement: Basic Financial Statements, Trial Balance, Preparation of Final Accounts, Basic Adjustments to final Accounts, Methods of Presenting Final Accounts Practical Problem; Issues in Hospitals.

Unit 3. Introduction to materials control, stock levels, EOQ, Lead Time, Materials pricing and issues (LIFO and FIFO); Introduction to cost accounting- elements and types of cost, Cost sheet preparation (Introduction only).

Unit 4. Introduction: Definition, Scope, and Objectives of Financial Management; The goal of a Firm: Profit Maximization vs. Wealth Maximization; Financial Functions – Financing and Investment; the role of a Finance Manager in Hospital; Time Value of Money: Concept; compounding and Discounting Concepts; Challenges in the hospital operations- financial perspective.

Unit 5. Basics of Capital Budgeting: Nature of investment decisions; importance of investment decisions; investment evaluation criteria; capital budgeting techniques – NPV, IRR, Payback, and accounting rate of return.

Suggested Readings:

1. Financial Management for Hospital Administration by G.R. Kulkarni, P. Satyashankar, Libert Anil Gomes, latest edition, Jaypee Brothers Medical Publishers.
2. Healthcare Finance: An Introduction to Accounting and Financial Management by Louis C. Gapenski, 4th Edition, 2023, Kindle Edition.
3. India Public Finance and Policy Report: Health Matters by Jyotsna Jalan, Sugata Marjit, and Sattwik Santra, OUP 2020.
4. Management Accounting by M.Y Khan and P.K. Jain, 8th Edition, 2021, McGraw Hill.
5. Financial Management by I. M. Pandey, 12th Edition, 2021, Pearson.
6. Financial Management: Text, Problems, and Cases by M.Y Khan and P. K. Jain, 8th Edition, 2018, McGraw Hill.
7. Cost Accounting: Text, Problems, and Cases by Jawahar Lal, Seema Srivastav, Manisha Singh, 6th Edition, 2019, McGraw Hill India.
8. Introduction to Accountancy by T.S. Grewal and S.C Gupta, 2016, S. Chand Publishing.
9. Management Accounting by Dr. B.K. Mehta, 2019, SBPD Publications.
10. Introduction to Financial Management of Healthcare Organizations by Michael Nowicki, 8th Edition, 2021, Health Administration Press.

Teaching-Learning Process:

The teaching-learning process may be interactive classroom sessions with the help of PowerPoint presentations, reflective assessments, industry visits, workshops, and case study discussions to ensure active participation and continuous learning.

Assessment Methods:

Internal Examinations (30 marks): Internal assessment may be conducted by using any one or in combinations of Class participation, Presentation, Project writing, Case studies, Assignments, and Surprise tests as suitable.
External Examination (70 Marks): End Semester Written Examination, duration 4 hours.

MINOR COURSE- 4

Course Name: Hospital Information System

Course Code: BBAHMMN401

Course Type: **MINOR (Theoretical)**	Course Details: **MNC- 4**			L-T-P: **4-1-0**	
Credit: **5**	Full Marks: **100**	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
		0	**30**	0	**70**

Course Objective: The course "Hospital Information System (HIS)" aims to equip students with a comprehensive understanding of the principles, design, implementation, and management of hospital information systems. The course will explore the integration of various healthcare processes through information technology, focusing on the optimization of healthcare delivery, patient data management, and administrative efficiency. Students will learn how to leverage HIS to improve clinical decision-making, enhance communication among healthcare providers, and ensure the security and privacy of patient information.

Learning Outcomes:

1. Remembering:
   - Outcome: Identify the key components and functions of a Hospital Information System.
   - Description: Students will recall the fundamental elements such as Electronic Health Records (EHR), Laboratory Information Systems (LIS), Radiology Information Systems (RIS), and the roles they play in healthcare settings.

2. Understanding:
   - Outcome: Explain the workflow and data flow within a Hospital Information System.
   - Description: Students will demonstrate an understanding of how different HIS components interact and share information across various departments.

3. Applying:
   - Outcome: Utilize HIS tools to manage patient records and support clinical decision-making.
   - Description: Students will apply their knowledge by using HIS software to enter, retrieve, and analyze patient data, demonstrating how these systems support daily hospital operations.

4. Analyzing:

- Outcome: Evaluate the effectiveness of HIS in enhancing patient care and operational efficiency.
- Description: Students will analyze case studies or real-world examples to assess how HIS impacts clinical outcomes, workflow efficiency, and patient satisfaction.

5. Evaluating:
- Outcome: Critically assess the challenges and limitations associated with the implementation of HIS in healthcare facilities.
- Description: Students will evaluate issues such as data privacy concerns, interoperability challenges, user training needs, and the financial implications of HIS adoption.

6. Creating:
- Outcome: Design a blueprint for implementing an HIS in a healthcare facility, considering technical, organizational, and regulatory factors.
- Description: Students will synthesize their knowledge to create a comprehensive plan for deploying an HIS, including system selection, customization, staff training, and compliance with healthcare regulations.

Unit 1. Data and information; Organization structure and business processes- an overview; Introduction to the information system; Resources and components of the information system; Types of Information System; Management Information System (MIS)- evaluation and role in an organization, MIS developing process- steps, Simon's model in the information system; Decision Support System (DSS), Executive Support System (ESS/EIS), Transaction Processing System (TPS)- role of these systems in strategic decision making.

Unit 2. Overview of Hospital Information System (HIS)- history and evaluation, Key components of HIS- HER, LIS, RIS, PACS, etc; Standards and regulations in HIS (HIPAA, DICOM, HL7, NABH, Health Data Management Policy 2020, ISO/IEC 2700:2013- Overview and usage only).

Unit 3. HIS Architecture and dataflow, Patient Data Management- Admission, Discharge, and Transfer (ADT), Workflow automation in HIS, ICD-SNOMED integration with HIS; Electronic Healthcare Record- EMR, Electronic Health Record Standards for India by MoHFW, security and storage compliances of patient care data, Challenges of electronic medical records.

Unit 4. Types and sources of healthcare data in healthcare organization- Data- Information- knowledge- wisdom hierarchy; relevance of data and information in business process- types of data- representation of data (statistically and graphically); Decision making models- data analytics and predictions, basic overview of regression analysis, logistics, kNN, Naïve Bayes. Customer Relationship Management (CRM) and Supply Chain- Overview.

Unit 5. Software management and Hospital Information Systems: IT in healthcare; MIS; HIS and its components- Cloud-based healthcare management system (e.g., HINAI), IPD and OPD management system including booking, hospital store management system, Blood bank & transfusion management system (ROKTOKOSH), Vendor management applications, Government online portals like ABHA, Co-WIN, Aarogya Setu, etc.

Suggested Readings:

1. Hospital Supportive Services: Hospital Administration in the 21st Century by S.L Goel and R. Kumar, Deep & Deep Publications, 2004.
2. Patient Care Services and Hospitals by S. Porkodi, Excel Books, Latest Edition.
3. Hospital Supportive Services- Sangeetha Natarajan, Excel Books, Latest Edition.
4. Hospital Information System: A concise study by S. A. Kelkar, Prentice Hall India Learning Private Limited, 2010.
5. Management Information System by K.C Laudon and Jane P. Laudon, 7th Edition, Pearson India, 2022.
6. Management Information System by Rames Buhl, McGraw-Hill.
7. Healthcare Data Analytics by Reddy and Agarwal, Chapman and Hall.
8. Data Analytics by Maheswari, McGraw-Hill India.

Teaching-Learning Process:

The teaching-learning process may be interactive classroom sessions with the help of PowerPoint presentations, reflective assessments, industry visits, workshops, and case study discussions to ensure active participation and continuous learning.

Assessment Methods:

Internal Examinations (30 marks): Internal assessment may be conducted by using any one or in combinations of Class participation, Presentation, Project writing, Case studies, Assignments, and Surprise tests as suitable.
External Examination (70 Marks): End Semester Written Examination.

SKILL ENHANCEMENT COURSE-3

Course Name: Data Analysis using Python

Course Code: BBAHMSE401

Course Type: **SE (Theoretical)**	Course Details: SEC-3			L-T-P: 2-1-0	
Credit: 3	Full Marks: 50	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
		0	**15**	0	**35**

Course Objectives:

Students will learn how to use Python to analyze various sorts of data in this course. Students will gain knowledge of how to prepare data for research, carry out straightforward statistical analysis, produce relevant data visualizations, and forecast future trends using data.

Learning Outcomes

On successful completion of the course, students will be able to:
1. Understanding the basics of python for performing data analysis
2. To gain insights from data, one must comprehend the data and do pre-processing, processing, and data visualization.
3. For applications in mathematics, science, and web data analysis, use various Python packages.
4. Develop the model for data analysis and evaluate the model performance.

Unit 1: Python Fundamentals for Data Analysis Python data structures, Control statements, Functions, Object Oriented programming concepts using classes, objects, and methods, Exception handling, Implementation of user-defined Modules and Packages, and File handling in python.

Unit 2: Introduction to Data Understanding and Pre-processing Knowledge domains of Data Analysis, understanding structured and unstructured data, Data Analysis process, Dataset generation, Importing Dataset: Importing and Exporting Data, Basic Insights from Datasets, Cleaning and Preparing the Data: Identifying and Handle Missing Values.

Unit 3: Data Processing and Visualization Data Formatting, Exploratory Data Analysis, Filtering, and hierarchical indexing using Pandas. Data Visualization: Basic Visualization Tools, Specialized Visualization Tools, Seaborn Creating and Plotting Maps.

Unit 4: Mathematical and Scientific applications for Data Analysis Numpy and Scipy Package, Understanding and creating N-dimensional arrays, Basic indexing, and slicing, Boolean indexing, Fancy indexing, Universal functions, Data processing using arrays, File input and output with arrays.

Unit 5: Analysing Web Data, Data wrangling, Web scrapping, Combing and merging data sets, Reshaping and pivoting, Data transformation, String Manipulation, and case study for web scrapping.

Unit 6: Model Development and Evaluation Introduction to machine learning- Supervised and Unsupervised Learning, Model development using Linear Regression, Model Visualization, Prediction and Decision Making, Model Evaluation: Over-fitting, Under-fitting, and Model Selection.

Suggested Readings:

1. Learning Python, by David Ascher and Mark Lutz, Publisher O'Reilly Media.
2. "Python Programming using Problem Solving approach", by Reema Thareja, Oxford University press
3. "Python for Data Analysis", by Wes Mckinney, First edition, Publisher O'Reilly Media.
4. Learning with Python, by Allen Downey, Jeffrey Elkner, Chris Meyers, Dreamtech Press
5. Data Analysis with Python: A Modern Approach, by David Taieb, 1st Edition, Packt Publishing

Teaching Learning Process:

The teaching-learning process may be interactive classroom sessions. It includes theoretical discussion and numerical problems solving.

Assessment Methods:

Internal Examination (15 Marks): Internal Assessment may be conducted by using any one or in combinations of Class participation, Presentation, Project Writing and Presentation, Assignment and Presentation, and Surprise Test as suitable.

External Examination (35 Marks): End Semester Written Examination, Duration 2 Hours.

VALUE ADDED COURSE - 2

Course Name : To be chosen from the pool
Course Code :

Course Type: **VA (Theoretical)**	Course Details: **VAC-2**			L-T-P: See Pool	
Credit: 4	Full Marks: **50**	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
			15		**35**

VOCATIONAL COURSE - 2

Course Name : Vocational Course
Course Code : VC401

Course Type: **VC (Practical)**	Course Details: **VCD-1**			L-T-P: **0-0-8**	
Credit: 4	Full Marks: **50**	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
		30		**20**	

SUMMER INTERNSHIP - 2

Course Name : Summer Internship
Course Code : SI401

Course Type: **SI (Practical)**	Course Details: **SID-1**			L-T-P: **0-0-8**	
Credit: 4	Full Marks: **50**	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
		30		**20**	

SEMESTER V

MAJOR COURSE-7

Course Name: Quality Management in Hospitals

Course Code: BBAHMMJ501

Course Type: **MAJOR (Theoretical)**	Course Details: **MJC-7**			L-T-P: **4-1-0**	
Credit: **5**	Full Marks: 100	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
		0	**30**	0	**70**

Course Objectives: The objective of the course "Quality Management in Hospitals" is to provide students with a comprehensive understanding of the principles, methodologies, and techniques involved in managing and improving the quality of healthcare services within a hospital setting. Through a combination of theoretical knowledge and practical applications, this course aims to equip students with the necessary skills to contribute to the delivery of high-quality healthcare and patient safety.

Learning Outcomes: By the end of this course, students should be able to:

1. Understand the concept of quality management in the context of healthcare, including its importance, goals, and key components.
2. Identify and evaluate different quality management models, frameworks, and standards commonly used in hospitals.
3. Analyze the role of leadership and organizational culture in fostering a culture of quality and continuous improvement in hospitals.
4. Apply quality improvement tools and techniques to identify, measure, and analyze healthcare processes, aiming to reduce errors, waste, and inefficiencies.
5. Develop skills in collecting and analyzing data to monitor and evaluate healthcare quality indicators, such as patient satisfaction, clinical outcomes, and safety measures.
6. Understand the importance of patient-centered care and effectively communicate with patients and their families to ensure their involvement in quality improvement efforts.
7. Explore strategies for managing and mitigating risks in healthcare, including the identification of potential hazards, implementation of preventive measures, and effective incident reporting systems.
8. Evaluate the impact of healthcare policies, regulations, and accreditation programs on quality management in hospitals, i.e., NABH, NABL, and JCI.
9. Understand the ethical considerations and legal implications related to quality management, including patient privacy, confidentiality, and informed consent.

10. Develop skills in project management and teamwork to effectively implement quality improvement initiatives within a hospital setting.

Unit 1. Definition of quality, the evolution of the concept of quality- different quality gurus and their works in brief; characteristics of quality; Cost of Quality; Present international scenario of quality management; International societies for quality in healthcare, Accreditation bodies- ISO, NABH, NABL. JCI, HFAP, Accreditation Canada, ACHS, EFQM, etc. (Overview and roles)

Unit 2. Quality criteria and aspects in hospitals; quality improvement process in healthcare; structures for managing quality, outcomes of quality management systems in healthcare; Identification of quality problems in healthcare; quality assurance processes;

Quality tools and techniques: why-why analysis, root cause analysis, Seven basic Quality Control Tools- Check sheet, Histogram, Scatter Diagram, Process Mapping, Cause and Effect Diagram, Pareto analysis, Control chart; Kaizen, Quality Circles, 5S, Benchmarking.

Unit 3. Quality performance measurements: Patient satisfaction- QFD- SERVQUAL; Hospital Acquired Infections, Readmission rates, Mortality rates, Length of Stay, Patient Safety Indicators (PSIs), Compliance with core measures, Patient wait times, Medication errors, Care and Coordination; Patient-centric management; Clinical Auditing.

Unit 4. Hospital and healthcare Risk Management- key risk management principles and concepts, risk assessment and analysis, risk mitigation & control measures; Patient safety and risk management- Failure Mode and Effect Analysis (FMEA), Clinical audit, FSSAI & food quality audit, Sanitization, Safety audit; Crisis handling & Disaster management; Financial audit; Concept of Zero Defect, Six Sigma, and Lean Six Sigma. Case Studies on COVID-19 Situations and Clinical Error.

Unit 5. Certification and Accreditation: Concept of NABH- NABH 6th Edition- Core areas- Chapters from 1to 10; NABL- concept and core areas; NABH- Other Standards (Overview)- Blood Bank, Small Healthcare, Alternative Medicines, Sustainable Development, Healthcare Travelling; JCI- concept and Core areas; Standards of Primary level and District level hospitals in India; Importance of accreditations; Impact of accreditations on healthcare.

Unit 6. Statutory requirements for healthcare in India: Clinical Establishment Act 2010- Overview only; National Quality Assurance Standards (NQAS)- Overview and concept; Drugs and Cosmetic Act- Overview only; Medical Council of India (MCI) regulations- Overview; Central Drugs Standard Control Organization (CDSCO)- Overview only, FSSAI- overview only.

Suggested Readings:

1. Quality Management in Hospitals, 2009, by S.K Joshi, Jaypee.
2. Handbook of Healthcare Quality and Patient Safety, 3rd Edition-2023, by Gyani J. Girdhar, Jaypee Brothers Medical Publishers.
3. Standard Operating Procedures SOP for Hospitals, 2nd Edition, by Dr. Arun K. Agarwal, Notion Press.
4. Checklists for Hospitals by Dr. Arun K. Agarwal, Notion Press.
5. NABH Accreditation Standards for Hospitals, 5th Edition, NABH, Dr. Atul Mohan Kochhar, Quality Council of India- NABH.

6. NABH Accreditation Standards for Hospital, 6th Edition, NABH (https://portal.nabh.co/NABHStandards.aspx#gsc.tab=0)
7. Step by Step Quality Hospital Care by Farooq Jan, Jaypee Brothers Medical Publishers Private Ltd.
8. Total Quality Management, 5th Edition, by Dale H. Besterfield, Glen H. Besterfield et al., Pearson Education.
9. Total Quality Management, 4th Edition, by Poornima M. Charantimath, Pearson Education.
10. Lean Six Sigma for Dummies, 4th Edition, by Jo Dowdall and Martin Brenig-Jones, For Dummies, 2022.
11. Applying Lean Six Sigma in Healthcare: A Practical Guide to Performance Improvement, by Thomas K. Ross, 2019, Jones & Bartlett Learning.
12. Joint Commission International Accreditation Standards for Hospitals, 6th and 7th Edition, JCI.

Teaching-Learning Process:

The teaching-learning process may be interactive classroom sessions with the help of PowerPoint presentations, reflective assessments, industry visits, workshops, and case study discussions to ensure active participation and continuous learning.

Assessment Methods:

Internal Examinations (30 marks): Internal assessment may be conducted by using any one or in combinations of Class participation, Presentation, Project writing, Case studies, Assignments, and Surprise tests as suitable.

External Examination (70 Marks): End Semester Written Examination, duration 3 hours

MAJOR COURSE-8

Course Name: MRD, TPA and Risk Management

Course Code: BBAHMMJ502

Course Type: **MAJOR (Theoretical)**	Course Details: **MJC-8**			L-T-P: **4-1-0**	
Credit: **5**	Full Marks: **100**	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
		0	**30**	0	**70**

Course Objectives:

1. To understand the fundamentals of medical records management in healthcare settings.
2. To learn the standards and guidelines for maintaining, organizing, and securing medical records.
3. To explore the legal and ethical aspects related to patient data management.
4. To develop skills in managing electronic health records (EHR) and paper-based systems.
5. To gain insight into the role of medical records in enhancing healthcare delivery and research.
6. To introduce the concept and role of Third-Party Administrators in health insurance.
7. To understand the process of claim management and settlement in healthcare.
8. To learn the legal and regulatory framework governing TPAs in the healthcare sector.
9. To develop skills in evaluating and managing healthcare claims.
10. To study the impact of TPAs on healthcare quality and efficiency.
11. To understand the principles and practices of risk management in hospitals.
12. To learn how to identify, assess, and mitigate risks in healthcare settings.
13. To explore the regulatory and legal aspects of risk management in hospitals.
14. To develop strategies for managing medical, operational, and financial risks.
15. To gain knowledge of patient safety initiatives and quality improvement techniques.

Learning Outcomes:

By the end of the course, students will be able to:
1. Remember: Define key terms and concepts related to medical records (e.g., health information management, patient records), Identify the functions and responsibilities of a TPA in healthcare; Define key concepts and terminology related to risk management in hospitals.
2. Understand: Explain the importance of accurate and secure medical records in healthcare operations; Explain the process of claim adjudication and management in a TPA setup; Discuss the importance of risk management in ensuring patient safety and healthcare quality.

3. Apply: Demonstrate the use of healthcare software systems for managing medical records; Execute the necessary steps in handling and processing healthcare claims. Implement basic risk management tools and techniques in a hospital setting.

4. Analyze: Assess the implications of non-compliance with legal standards in medical record management, Compare different models of TPA services and assess their effectiveness; Evaluate the different types of risks (e.g., medical errors, financial risks, operational risks) that hospitals face.
5. Evaluate: Critically review different types of medical records for accuracy, compliance, and completeness. Evaluate the impact of TPAs on patient satisfaction and cost-effectiveness in healthcare, and Assess the effectiveness of risk mitigation strategies and quality improvement programs in healthcare.
6. Create: Design a workflow or system to manage and improve medical record-keeping in healthcare facilities, Propose strategies for improving the efficiency of TPA services in healthcare settings, and Develop a comprehensive risk management plan tailored to a hospital or healthcare organization.

Unit 1. Definition, the importance of medical records; a brief history of medical records across the globe; types of medical records- outpatient basis, IMR, SOMR, POMR- SOAP; documentation requirements, characteristics of a good medical record; statutory requirements for storage and maintenance, coding, indexing, and filing; Reports and returns; Electronic Medical Records (EMR), NABH Standards for EMR System.

Unit 2. Introduction to ICD-10, systematic nomenclature of medicine system, clinical terms (in brief), the difference between ICD-9 and ICD-10, introduction to SNOMED CT, development of ICD-10-CM- latest standards- a brief discussion on coding system and chapters; ICD-10-PCS introduction and uses; Omaha system and use of NANDA system (only in brief).

Unit 3. Define Insurance- IRDA regulations- health insurance- types of health insurance; Health Insurance coverage and benefits, factors influencing Health Insurance Premiums; Government and Private Health Insurances- special emphasis on CGHS, Ayushman Bharat, Swastha Sathi, ESI. Use of medical records in Health Insurance.

Unit 4. Third-Party Administration (TPA)- Role and Functions of TPA- TPA Services and Models- TPA Operations and Claims Processing- TPA Advantages and Disadvantages- Ethical Considerations in TPA Operations; Principles of Effective TPA.

Unit 5. Risk Management in Health Insurance- Risk Management Principles and Techniques, Risk Factors in Health Insurance, Financial Implications of Risk Management; Fraud and Abuse Prevention in Health Insurance; Regulatory and Legal Frameworks in Risk Management- IRDA and other compliances.

Unit 6. Health Insurance Claims and Administration- Health Insurance Claim Process, Claim Settlement, and Reimbursement; Effective Utilization of TPA Services- Communication Skills for Health Insurance Operations- Performance Evaluation of TPAs and Providers; Role of Patient, TPA, and Hospital Administrator; Legal aspects of medical records; medical audit- importance of medical records and risk management in medical audit.

Suggested Readings:

1. Medical Records Organization and Management by G.D. Mogli, 2nd Edition, Jaypee Brothers Medical Publishers.
2. New Perspectives Medical Records: Meeting the Needs of Patients and Practitioners by Giovanni Rinaldi, 2017, 1st Edition, ISBN: 978-3319286594, Springer International Publishing Switzerland.
3. Medical Records use and abuse by Heidi Tranberg & Jem Rashbass, 2018, CRC Press.
4. Nursing Research and Statistics by Suresh K. Sharma, 3rd Edition, 2018, Elsevier India.
5. ICD-10-CM 2022 The Complete Official Codebook, 2021, American Medical Association.
6. Electronic Health Record (HER) Standards for India 2016 by e-Health Division, Department of Health & Family Welfare, GOI.
7. Understanding ICD-10-CM and ICD-10-PCS: A Worksheet by Mary Jo Bowie & Regina Schaffer, 2011, Delmar Cengage Learning.
8. Nursing Diagnosis: Definitions and Classifications 2015-2017, 10th Edition, Wiley Blackwell.
9. Electronic Medical Records: A Practical Guide for Primary Care, Current Clinical Practice series, Edited by Neil S. Skolnik, 2011, Humana Press.
10. Health Insurance in India- Dr. Raj Soni, 2023, Book Rivers
11. Innovations and Advancement in Health Insurance by Jagendra Rana, 2021, Bluerose Publishers Pvt Ltd.
12. Third Party Administrators and Brand Building by Sandip Sane, Lambert Academic Publishing
13. https://policyholder.gov.in/documents/38105/40090/English+Health+Handbook.pdf/391779c9-5379-df48-7553-6f409e393fe0?t=1631522774855&download=true
14. https://www.libertyinsurance.in/Docx/IC-38.pdf
15. Insurance and Risk Management by Bimal Jaiswal and Shiva Manoj, 2020, New Royal Book Company.
16. Hospital Patient Care Relationship Coordinator by G.D. Mogli, 2018, Jaypee Brothers Medical Publishers.
17. NABH Digital Health Standards for HIS/EMR Systems, 1st Edition, 2024, NABH

Teaching-Learning Process:

The teaching-learning process may be interactive classroom sessions with the help of PowerPoint presentations, reflective assessments, industry visits, workshops, and case study discussions to ensure active participation and continuous learning.

Assessment Methods:

Internal Examinations (30 marks): Internal assessment may be conducted by using any one or in combinations of Class participation, Presentation, Project writing, Case studies, Assignments, and Surprise tests as suitable.

External Examination (70 Marks): End Semester Written Examination, duration 3 hours

MAJOR COURSE - 9

Course Name: Healthcare Analytics and Informatics

Course Code: BBAHMMJ503

Course Type: **MAJOR (Theoretical)**	Course Details: **MJC-9**			L-T-P**: 4-1-0**	
Credit: **5**	Full Marks: **100**	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
		0	**30**	0	**70**

Course Objectives:

- To understand the fundamental concepts of healthcare data, including its sources, types, and quality.
- To gain knowledge of statistical methods and data mining techniques relevant to healthcare analytics.
- To develop proficiency in data cleaning, preparation, and transformation using appropriate tools and techniques.
- To interpret and communicate complex analytical findings to diverse audiences.

Learning Outcomes-

- To explain how to use health data to improve the quality of an organization.
- Formulate knowledge in the process of health care data analytics and the tools used in each step.
- Explain the general functions, purposes, and benefits of analytics in various healthcare and medical settings.
- Propose steps to familiarize students with basic analytical techniques and visualization tools.
- Improve students' understanding of the application of different analytics techniques on datasets collected from health care units.

Unit 1 Health Care data as an organization asset: Data Information, Knowledge and wisdom hierarchy (DIKW), sources of health care data- Clinical (Patient Record, Diagnostics), Operational (Workflow, Scheduling), and Financial (Billing, Insurance); Importance of data in healthcare organizations, Challenges of using data for quality and performance improvement, The basics of data governance: Privacy, Security, Regulatory compliance

Unit 2: Understanding the Data: Introduction to healthcare data- Structured vs. Unstructured; Key concepts in data understanding &Overview of the data analysis process using PowerBI, understanding pre-processing and its role using PowerBI, Explanation of basic statistical terms (mean, median, mode), Introduction to common statistical distributions in healthcare (normal, binomial), Case Study on: How data is used to inform decision-making in healthcare

Unit 3: Introduction to Data Analytics Tools and Techniques for Health care: Definitions of data analytics and related terminology, the role and importance of a data analyst in healthcare, General steps of data analytics using No Code/Low Code Platform. Importance of interpreting and presenting healthcare data effectively. Introduction to healthcare data systems and architectures (basic concepts). Major data storage concepts: Data Warehouse, ETL (Extract, Transform, Load) – theory and significance.

Unit 4: Introduction to Data Analysis and Techniques: Introduction to prediction and classification in healthcare, regression, Regression in healthcare decision-making, a Case Study. Basic explanation of classification, Introductory overview of clustering and association. Real-world applications of these techniques: Predicting patient readmissions, improving patient satisfaction, Optimizing resource allocation.

Unit 5: Using data to drive quality improvement, Introduction to the DMAIC (Define, Measure, Analyze, Improve, Control) framework. The role of data in healthcare problem-solving, Conceptual discussion of analytical case studies, Importance of data-driven decision-making for managers; NABH Digital Health Standards for Hospital.

Suggested Readings:

1. Reddy & Aggarwal, Healthcare Data Analytics, 2023, Chapman and Hall.
2. Vikas Kumar, Healthcare Analytics Made Simple: Techniques in healthcare computing using machine learning and Python, Packt Publishing.
3. Maheshwari, Data Analytics, McGraw Hill India
4. Mohammed Alfan, Data Analytics, Skills to Succeed.
6. Katherin Rowell, Lindsay Betzendahl, Cambria Brown, Data Visualization for Health, 2020, Wiley.
7. Travor L. Strome, Healthcare Analytics for Quality and Performance Improvement, 2013, John Wiley and Sons INC.
8. Gerald L. Gladon, Detlev H., Donna Slovensky, Information Technology for Healthcare Managers, 9th Edition, 2021, ACHE.
9. Dheenadhayalan, S., Data Governance in Healthcare IT: Ensuring Compliances and Privacy in Medical Data Management, 2025.
10. Marc D. and Sandefer, S. 'Data Analytics in Healthcare Research', 2022, AHIMA Press.
11. Joshi, Ransom, and Ransom, The Healthcare Quality Book: Vision, Tragedy, and Tools, 5th Edition, 2022, Health Administration Press.
12. Alan Murray, Power BI for Jobseekers, 2023, BPB Publishers.
13. NABH Digital Health Standards for Hospitals, 1st Edition, 2024, NABH.

Teaching-Learning Process:

The teaching-learning process may be interactive classroom sessions with the help of PowerPoint presentations, reflective assessments, industry visits, workshops, and case study discussions to ensure active participation and continuous learning.

Assessment Methods:

Internal Examinations (30 marks): Internal assessment may be conducted by using any one or in combination of Class participation, Presentation, Project writing, Case studies, Assignments, and Surprise tests as suitable.

External Examination (70 Marks): End Semester Written Examination, duration 3 hours

MINOR COURSE -5

Course Name: Health Economics

Course Code: BBAHMMN501

Course Type: **MINOR (Theoretical)**	Course Details: **MNC-5**			L-T-P: **4-1-0**	
Credit: **5**	Full Marks: **100**	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
		0	**30**	0	**70**

Course Objective:

The primary objective of the Health Economics course is to provide students with a comprehensive understanding of the economic principles and tools applied to healthcare systems. It aims to equip students with analytical skills to evaluate healthcare policies, understand healthcare financing, and assess the role of economics in decision-making processes. This course emphasizes the relationship between health, healthcare services, and economic development at the individual, community, and national levels.

Learning Outcomes

By the end of this course, students will be able to:

1. **Understand Economic Principles and Business Decisions**: Demonstrate knowledge of fundamental economic concepts and their application to healthcare systems and policies.
2. **Analyze Healthcare Markets**: Evaluate the functioning of healthcare markets, including the roles of supply and demand, and assess the impact of market failures.
3. **Evaluate Health Policies**: Critically analyze health policies and programs in terms of efficiency, equity, and effectiveness.
4. **Understand Healthcare Financing**: Examine different healthcare financing models and their implications on access, quality, and affordability.
5. **Apply Economic Evaluation Tools**: Use cost-benefit, cost-effectiveness, and cost-utility analyses to make informed decisions in healthcare management and policy development.
6. **Relate Health and Economic Development**: Understand the interlinkages between health outcomes and economic growth at the macroeconomic level.
7. **Address Global Health Challenges**: Apply economic concepts to address global health challenges, including resource allocation, health disparities, and policy interventions.

Unit 1. **Fundamentals of Economics**: Basic concepts of economics; Important terms related to economic theory, characteristics and classification of economics, Basic Economic problems;

Definition and scope of health economics, Importance of health in economic development, Distinction between health and healthcare; Key concepts: efficiency, equity, and effectiveness.

Unit 2. **Demand and Supply Analysis**: Meaning- Determinants of Demand – Law of Demand and Exceptions, Demand for Healthcare- factors influencing healthcare utilization; Elasticity of Demand – Concepts and types, Measurement of elasticity.

Supply – Meaning, Determinants of supply. Law of supply- Elasticity of supply, Measurement of elasticity of supply. Healthcare providers and market structure;

Demand vs Supply: Determination of equilibrium price by demand-supply interaction. Market failures in healthcare: externalities, information asymmetry, and moral hazard.

Unit 3. Production and Cost Analysis: Meaning of Production Function; Law of Variable Proportion, Iso-quant, Iso-cost lines, Choice of best input combination.

Cost function; Total, Fixed and Variable costs; derivation of Total cost curve from Fixed and Variable cost curves. Short–run and Long-run costs, average and marginal costs.

Unit 4. **Market Morphology**: Classification of market structure; short-run and Long-run equilibrium under perfect competition, equilibrium under Monopoly, monopolistic competition, and oligopoly market; Price discrimination under monopoly.

Unit 5. **Healthcare Financing**: Overview of healthcare financing model- public, private, mixed. Healthcare financing from various sources; Healthcare expenditure trends in developing and developed countries, National Health Scheme and Out-of-the-pocket model; Health Care Budget – purpose, types, and practices in the Indian context.

Unit 6. Economic Evaluation of Healthcare: Cost-benefit, cost-effective, and cost-utility analysis; outcome measurements- QALYs and DALYs; Health is an investment- population and economic development- IHI Triple Aim Framework; Economics of healthcare problems in population: Breastfeeding, abuse of alcohol, Economics of Covid-19 Pandemic.

Suggested Readings:

1. Health Economics for Hospital Management – Shuvendu Bikash Dutta, Jaypee Brothers Medical Publishers.

2. Health Economics – Jay Bhattacharya, Timothy Hyde, and Peter Tu, Palgrave Macmillan.

3. Health Economics – Dr. Jeyasingh, Dr. D. Solomon Raj, Dr. D. Jery Josephin.

4. Health Economics – Pushpalata Pattnaik.

5. Health Economics – P. C. Das.

6. The Economics of Health and Health Care – Sherman Folland, Allen C. Goodman, Miron Stano, 8th Edition, International Student Edition, Taylor and Francis.

Teaching-Learning Process:

The teaching-learning process may be interactive classroom sessions with the help of PowerPoint presentations, reflective assessments, industry visits, workshops, and case study discussions to ensure active participation and continuous learning.

Assessment Methods:

Internal Examinations (30 marks): Internal assessment may be conducted by using any one or in combination of Class participation, Presentation, Project writing, Case studies, Assignments, and Surprise tests as suitable.

External Examination (70 Marks): End Semester Written Examination, duration 3 hours

SEMESTER- VI

MAJOR COURSE-10

Course Name: Project Work and Viva
Course Code: BBAHMMJ601

Course Type: **MAJOR (Practical)**	Course Details: **MJC-10**			L-T-P: **0-0-10**	
Credit**: 5**	Full Marks: 100	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
		60	**0**	**40**	**0**

Course Objective:
The course objective of project work and viva (or viva voce) can vary depending on the specific academic requirement, level of education, and the nature of the course or program.

Learning Outcome:
After completing the course, the student shall be able to:

1. **Application of Knowledge**: The primary objective is to apply the knowledge and skills acquired during study to a practical project. This allows students to demonstrate their understanding of theoretical concepts in a real-world context.
2. **Problem Solving**: Projects often require students to identify and solve real or simulated problems. This helps them develop problem-solving skills, critical thinking, and creativity.
3. **Research Skills**: Project work typically involves conducting research, which helps students develop research skills such as data collection, analysis, and interpretation.
4. **Project Management**: Students may learn project management skills, including planning, organizing, and executing a project. This can be valuable for future careers where project management is required.
5. **Presentation Skills**: The viva or oral examination component of the course aims to assess a student's ability to communicate and defend their project work. This helps improve presentation and communication skills.
6. **Evaluation and Assessment**: It provides an opportunity for instructors to assess students' understanding of the subject matter, their ability to apply concepts, and the quality of their work.

7. **Feedback and Improvement**: The feedback received during the viva and project evaluation can be used for improvement. Students can identify areas of weakness and work on enhancing their skills and knowledge.

8. **Integration of Learning**: Project work often requires students to integrate knowledge from multiple areas or subjects, promoting a holistic understanding of the topic.

9. **Preparation for the Real World**: Project work and viva assessments simulate real-world scenarios where professionals are required to complete projects, present findings, and defend their work.

10. **Assessment of Soft Skills**: In addition to technical skills, project work, and viva can assess soft skills like teamwork, time management, and adaptability, which are crucial in many professions.

11. **Building Confidence**: Completing a project and presenting it during a viva can boost a student's confidence in their abilities and preparation for future challenges.

12. **Documentation Skills**: Students may be required to document their project work, which improves their ability to write reports and documentation, a valuable skill in many fields.

Assessment Methods:

Internal Examinations (60 Marks): Internal Assessments may be conducted by using any one or combinations of Presentations, Project Writings and Presentations, Assignments and Presentations.

External Examinations (40 Marks): End Semester Project Reports, Viva, and Presentations.

MAJOR COURSE - 11

Course Name: Marketing Management and Human Resource Management
Course Code: BBAHMMJ602

Course Type: **MAJOR** **(Theoretical)**	Course Details: **MJC-11**			L-T-P: **4-1-0**	
Credit: **5**	Full Marks: 100	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
		0	**30**	0	**70**

Course Objectives:

- To provide students with a comprehensive understanding of marketing and human resource management principles, tools, and strategies.
- To equip students with the ability to analyze and apply marketing and HR concepts in real-world organizational settings.
- To enable students to integrate marketing strategies with HR functions for achieving organizational goals.
- To foster critical thinking and decision-making skills required for managing both marketing and human resources effectively.

Learning Outcomes:

1. Remembering
   - Define core concepts in both Marketing Management and Human Resource Management, such as the marketing mix, segmentation, recruitment, selection, and performance appraisal.
   - Recall foundational theories, models, and frameworks related to consumer behavior, market strategies, and human resource functions.

2. Understanding
   - Explain the role of marketing and HR in driving organizational success and how these two areas are interconnected.
   - Describe the processes of market research, consumer segmentation, and HR planning in an organizational context.
   - Understand the impact of external factors (e.g., economic, legal) on marketing and HR strategies.

3. Applying
   - Apply marketing mix strategies and HRM practices (e.g., recruitment and employee training) to real-life business problems.
   - Demonstrate the integration of marketing and HR strategies, such as using HR-driven branding to improve marketing effectiveness and employer branding.
   - Implement marketing and HR analytics tools for decision-making and performance management.

4. Analyzing

- Analyze the interdependence of marketing and HR strategies and how they contribute to achieving long-term organizational goals.
- Examine case studies to identify effective marketing campaigns and HR practices and assess their impact on the organization.
- Compare and contrast different marketing and HR management strategies to determine their appropriateness in various business contexts.

5. Evaluating

- Critically evaluate the effectiveness of marketing and HR strategies in achieving organizational goals, including customer satisfaction, employee performance, and market growth.
- Assess the ethical implications of marketing practices and HR policies and their influence on stakeholders, including employees and customers.
- Judge the efficiency of marketing and HR initiatives using key performance indicators (KPIs) and propose improvements.

6. Creating

- Design an integrated marketing and human resource strategy for a business that aligns marketing objectives with HR goals, such as leveraging talent management for customer satisfaction.
- Create innovative solutions that address marketing challenges through effective human resource management practices, like improving customer service via employee engagement programs.
- Develop a comprehensive business plan that includes both marketing campaigns and HR development strategies to enhance overall organizational performance.

Unit 1. Introduction to Marketing: Definition, Nature, Scope & Importance of Marketing; Marketing concepts - traditional and modern; Marketing Environment; Marketing- Mix.

Unit 2. **Consumer Behaviour and STP**: Nature and Significance of Consumer behaviour; Stages and participation in the buying process; Market Segmentation, Targeting, and Positioning; Case Study on Consumer Behaviour.

Unit 3.

- **Product:** Concept of Product, Product mix. Product life cycle & its Stages
- **Price:** Price, Factors affecting price, Methods of pricing
- **Place:** Concept & Importance. Types of distribution channels, Factors affecting the choice of a distribution channel
- **Promotion**: Nature and importance of promotion, Promotional methods, Advertising, Personal selling & Sales promotion.

Case Study from the relevant field.

Unit 4: Human Resource Management- Concept: Nature; Scope; Objectives and Importance of Human Resource Management; Evaluation of Human Resource Management; Role; Function and

Qualities of Human Resource Manager; Difference between Human Resource Management and Personnel Management; Challenges of Healthcare Human Resources.

Unit 5: Human Resource Planning– Meaning; Objective, and Importance of Human Resource Planning; Human Resource Planning Process; Recruitment – Objective and Sources of Recruitment; Meaning and Purpose of Selection – Selection Process; Steps in selections; Selection techniques, Induction.

Unit 6: Training and Development; Meaning; Importance and Objective of Training; Steps in Training; Organizing Training Programme; Training Vs Development; Training Methods; Evaluation of Training Programmes; Performance Appraisal- meaning, objective, and techniques; Career Development.

Suggested Readings:

1. Marketing management, Philip Kotler-Prentice hall-India
2. Marketing management, K. Karunakaran- Himalaya publishing house
3. Marketing management, Rajan Saxena-Tata McGraw Hill
4. Marketing Management, Ramaswamy & Namakumari.
5. Essentials of Human Resource Management- Indranil Mutsuddi- New Age Internationals
6. Human Resource Management- Text and Cases, K. Aswathappa and Sadhna Dash,10th Edition 2023, McGraw Hill.
7. Human Resource Management (An Indian Adaptation), Susan L. Verhulst, David A. DeCenzo, Rama Shankar Yadav- 13ed 2021, Wiley.
8. Human Resource Management, Rajanikant Verma & Amita Yadav- 1st Edition 2023, Bharti Publications
9. Hospital Administration and Human Resource Management, D.K Sharma & R.C. Goyal- 7th Edition 2017, PHI Learning.

Teaching-Learning Process:

The teaching-learning process may be interactive classroom sessions with the help of PowerPoint presentations, reflective assessments, industry visits, workshops, and case study discussions to ensure active participation and continuous learning.

Assessment Methods:

Internal Examinations (30 marks): Internal assessment may be conducted by using any one or in combinations of Class participation, Presentation, Project writing, Case studies, Assignments, and Surprise tests as suitable.
External Examination (70 Marks): End Semester Written Examination, duration 3 hours

MAJOR COURSE-12

Course Name: Clinical and Business Law
Course Code: BBAHMMJ603

Course Type: **MAJOR** **(Theoretical)**	Course Details: **MJC-12**				L-T-P: **4-1-0**
Credit: **5**	Full Marks: **100**	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
		0	**30**	0	**70**

Course Objectives:

The objective of the Clinical and Business Law course is to provide students with an understanding of the legal principles and regulations that apply to healthcare providers and organizations, as well as legal issues that arise in the operation of a business. This includes topics such as medical malpractice, patient rights, healthcare regulations, contract law, company law, etc. The course also teaches the students how to identify and mitigate legal risks in a healthcare or business setting. The goal of the course is to give students the knowledge and skills needed to navigate the legal complexities of the healthcare and business industries and make informed decisions.

Learning Outcomes:

The learning outcomes of the Clinical and Business Law course are:

1. Students will be able to recall key principles of business law like the contract act, consumer protection act, Companies' law, or Clinical law like the MTP act, PNDT act, etc.
2. Students will be able to understand the legal implications of various clinical and business practices.
3. Students will apply legal principles to real-world scenarios in the clinical and business setting. Hospital administrators need this skill for the application of various laws and regulations in complex healthcare service setups.
4. Students will be able to analyse legal cases and statutes related to legal issues in business and clinical law.
5. Students will be able to evaluate the effectiveness of legal principles in protecting the rights and interests of stakeholders in clinical and business contexts.
6. Students will be able to create legal documents such as contracts and policies in compliance with clinical and business law.

Unit 1. Introduction to the Constitution of India- Preamble, fundamental duties, and rights; Constitutional provisions in healthcare by Ministry of Health and Family Welfare, GOI. Introduction to Indian legal system- distribution of power and hierarchy, Definition of Law- source of mercantile laws in India- bill and process to make a law in India.

Unit 2. Introduction to Contract Act: Definition, essential elements of a valid contract, types of contracts, offer, acceptance, consideration, capacity to contract, free consent; quasi and contingent contract; Hospital as a Bailor and Bailee; discharge of a contract, remedies for breach of a contract.

Unit 3.

- Sales of Goods Act 1930, Formation of the contract of sale of goods, condition, and Warranty, Transfer of Property in goods, the performance of Contract of Sales, Unpaid Seller;
- Negotiable Instrument Act 1981: Definitions and Characteristics of negotiable instruments, Holder and holder in due Courses, Crossing of the cheque; Dishonour, and discharge of negotiable instruments.

Unit 4.

- ESI Act 1948,
- Factories Act 1948,
- Partnership Act 1932: Definition; Nature, and kinds of Partnership, Rules regarding registration; Rights, and Duties of Partners; Dissolution.

Unit 5.

- MTP Act,
- PCPNDT Act,
- Transplantation of Human Organ Act (Amendments),
- Drugs and Cosmetic Act,
- The Mental Healthcare Act 2017.

Suggested Readings:

1. Hospital Management and Administration: Principles and Practice including Law by B.V. Subhrahmanyam, 1st Edition. 2018, CBS Publishers and Distributors.
2. Healthcare Law: Essentials for Medical Practice in India by Dr. Navin Kumar Koodamara, 2022.
3. Health Law by Dr. Ishita Chatterjee, 2019, Central Law Publications
4. Taxmann's Business Law by Sushma Arora, 10th Edition, 2022, Taxmann Publications Pvt Ltd.
5. Business Law by Dr. Sunita Srivastava and Rajni Gupta, Vaibhav Laxmi Prakashan, 2019.
6. Commercial Law by Arun Kumar Sen and Jitendra Kumar Mitra, 27th Edition, 2018, World Press.
7. Elements of Mercantile Law by N.D. Kapoor, 2019, Sultan Chand & Sons Pvt Ltd.
8. Laws on Hospital Administration by D. Samuel Abraham, Christian Medical Association of India, New Delhi.
9. Consumer Protection Act and Its Applicability to Medical Professionals by D. Samuel Abraham, Law Brain, Vellore.
10. Introduction to the Constitution of India by Durga Das Basu, 26th Edition, LexisNexis. Educational Printed, 2022.

Teaching-Learning Process:

The teaching-learning process may be interactive classroom sessions with the help of PowerPoint presentations, reflective assessments, industry visits, workshops, and case study discussions to ensure active participation and continuous learning.

Assessment Methods:

Internal Examinations (30 marks): Internal assessment may be conducted by using any one or in combinations of Class participation, Presentation, Project writing, Case studies, Assignments, and Surprise tests as suitable.
External Examination (70 Marks): End Semester Written Examination, duration 3 hours

MAJOR COURSE-13

Course Name: Inventory Control, Purchase, and Store Management in Hospitals
Course Code: BBAHMMJ604

Course Type: **MAJOR** **(Theoretical)**	Course Details: **MJC-13**			L-T-P: **4-1-0**	
Credit: **5**	Full Marks: **100**	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
		0	**30**	0	**70**

Course Objective: To equip students with the knowledge and skills necessary to effectively manage inventory, purchase, and store operations in healthcare settings, ensuring efficient supply chain management, cost-effectiveness, and patient care.

Learning Outcome:
By the end of this course, students will have a profound understanding of inventory control, purchase, and store management principles in the hospital context. They will be equipped to implement efficient and cost-effective supply chain practices, contributing to the overall effectiveness and quality of patient care.

1. Knowledge:
   - Define the principles of inventory control, purchase, and store management in the context of healthcare facilities.
   - Identify different types of inventories used in hospitals and their specific roles.
   - Analyze the impact of effective inventory management on healthcare organizations' financial stability and patient satisfaction.
2. Comprehension:
   - Explain the procurement process and its importance in maintaining a consistent supply of medical equipment and consumables.
   - Interpret inventory performance metrics to evaluate the efficiency of supply chain processes.
   - Compare and contrast various inventory control methods and their applicability to different hospital departments.
3. Application:
   - Implement inventory forecasting techniques to optimize stock levels and prevent stockouts in critical areas.
   - Utilize inventory management software to monitor stock movements, expiration dates, and reorder points.
4. Analysis:
   - Assess the risks associated with inadequate inventory management and its potential impact on patient care and safety.
   - Evaluate different suppliers and negotiate contracts to obtain the best value for hospital resources.
5. Synthesis:

- Develop comprehensive inventory control policies and procedures tailored to specific healthcare department needs.
- Devise a contingency plan for emergencies, ensuring uninterrupted supply during crises or disasters.
- Integrate inventory management with other hospital departments to streamline workflows and reduce redundancies.

6. Evaluation:

- Assess the effectiveness of inventory control and purchase strategies in terms of cost savings and resource optimization.
- Evaluate the ethical implications of inventory management decisions, considering factors like waste reduction and sustainable practices.

Unit 1. **Materials and Purchase Management:** Materials management- overview, the modern concept, scope, and objective; Special features of materials management applied to hospitals; Purchase management- functions, cycles, negotiations, documentation, legal requirements of purchasing.

Unit 2. **Hospital Inventory Management**: Definition of inventory; Control- need, objectives, scope, and importance of inventory control; Impact of inventory control in the profitability of the organizations; Different types of hospital inventories.
The cost associated with inventories;

Unit 3. **Selective inventory control**- concept, basis, and use of different types of selective controls- ABC, VED, HML, FSN, SDE, GOLF, SOS, XYZ. Multiple Basic Approach to Selective Inventory Control (MBASIC) approach to Drugs.

Unit 4. **Economic Order Quantity** (EOQ): Derivation of EOQ formula, reasons to modify EOQ to suit real-life situations, Effect of quantity and price discounts to EOQ;
Just-in-time and lead time analysis; Effects of long lead time on cost and profitability; elements of lead time.
Inventory models: safety stocks, fixation of re-order level, desired inventory level, designing of Q and P models of inventory control.

Unit 5. **Store Management**: Concept of Supply Chain Management, components; Hospital Supply Chain Management; Global competitive scenario.
Hospital Stores- Organization, function, relevance & importance of store keeping; Duties and responsibilities of the storekeeper, elements of good store organizations, centralized and decentralized stores; Store layouts- factors influencing design, principles of design, layout, facilities, bin location.

Unit 6. Stocks- Stock accounting and stock recording, Different methods of stock verification, investigations on discrepancies, reconciliation; Stock adjustment, valuation, and write-off; standardization and codification; Documents used in the material function.

Suggested Readings

1. Hospital Stores Management: An Integrated Approach by Shakti Kumar Gupta and Sunil Kant, Jaypee Brothers.
2. Managing a Modern Hospital by A. V. Srinivasan, 2nd Edition, 2008, Sage Response.
3. Handbook of Drug Store and Business Management by Ashok K. Gupta, 2018, CBS.
4. Purchasing and Supply Chain Management by Monczka et.al., 7th Edition, 2020, Cengage.
5. Purchasing and Supply Management by Anna E. Fylnn and P. Fraser Johnson, 15th Edition, 2019, McGraw-Hill.
6. Store Management and Operations by Kausik Sinha, 2020, Cyscoprime Publishers.
7. Essentials of Inventory Management by Max Muller, 3rd Edition, 2019, HarperCollins Leadership.
8. Inventory Management by Riya Goel, Dr. B.B. Pandey, 2022, Sahitya Bhawan Publications.

Teaching-Learning Process:

The teaching-learning process may be interactive classroom sessions with the help of PowerPoint presentations, reflective assessments, industry visits, workshops, and case study discussions to ensure active participation and continuous learning.

Assessment Methods:

Internal Examinations (30 marks): Internal assessment may be conducted by using any one or in combinations of Class participation, Presentation, Project writing, Case studies, Assignments, and Surprise tests as suitable.
External Examination (70 Marks): End Semester Written Examination, duration 3 hours

SUMMER INTERNSHIP-3

Course Name: Summer Internship
Course Code: SI601

<table>
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