MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WEST BENGAL
(Formerly West Bengal University of Technology)
Syllabus of BBA in HOSPITAL MANAGEMENT
(Effective from 2023-24 Academic Sessions)

Semester-VIII

Course Name: Social and Behavioral Sciences and Basics of Clinical Psychology
BBA(HM) 801

Mode: Offline Credits: 5(4L+1T)

Aim of the Course: This course provides a foundational understanding of social and behavioral sciences, exploring key psychological theories and their real-world applications. It introduces clinical psychology, focusing on overview of mental health diagnosis and treatment, while examining the relationship between behavior and health. Students will also develop essential research skills to analyze behavioral patterns and societal issues in healthcare settings.

Course Objectives: The course will introduce essential concepts in social and behavioral sciences and their relevance to human behavior. It will cover key theories of behavior, apply them to practical scenarios, and explore developmental psychology across life stages. Students will also learn about clinical psychology, mental health disorders, and the impact of psychological factors on health.

Goals:

CO1: Students will gain a comprehensive understanding of social sciences and behavioral sciences, including their scope, relevance, and impact on human behavior. They will explore essential theories, such as behaviorism, social learning, and cognitive theories, and analyze how cultural values, societal norms, and social institutions influence human behavior.

CO2: Students will develop an understanding of social psychology, focusing on social perception, cognition, and group dynamics. They will analyze how group behavior, leadership, and the processes of influence, persuasion, and social pressure affect individual and group actions.

CO3: Students will gain insights into developmental psychology by studying key theories and stages of human development. They will understand behavioral changes throughout different life stages, from childhood to aging, and explore the impact of developmental milestones on individual behavior and life challenges.

CO4: Students will develop a foundational understanding of clinical psychology, including its history, current practices, and the major psychological disorders. They will learn about clinical assessment techniques and treatment approaches, equipping them with the skills to recognize, diagnose, and address various mental health issues.

CO5: Students will explore how psychological factors affect physical health and learn about interventions to promote wellness and manage chronic conditions. They will also cover basic ethics in research, including informed consent and data

confidentiality, and familiarize themselves with fundamental research methods for analysing and interpreting social and behavioural data.

SI	Course Content	Mapped Module	Hours allotted
CO1	**Introduction to Social and Behavioral Sciences** Introduction to social sciences, examining its scope, relevance, and impact on understanding human behavior, essential theories of behavioral sciences, and cognitive theories, cultural values, societal norms, and social institutions shape human behavior.	M1	4
CO2	**Social Psychology and Group Dynamics** Introduction to Social Psychology, Social Perception and Social Cognition, Group Behavior and Leadership, Influence, Persuasion, and Social Pressure	M2	10
CO3	**Developmental Psychology and Behavior** Introduction to Developmental Psychology and overview on key theories, including those of Piaget, Erikson, and Vygotsky, Stages of Human Development, brief overview on behavioral changes associated with different stages of life, including childhood, adolescence, adulthood, and aging.	M3	10
CO4	**Basics of Clinical Psychology** Introduction to Clinical Psychology (history, evolution and current practice), Psychological Disorders (anxiety, depression, mania, bipolar disorder, and schizophrenia), overview on Clinical Assessment Techniques, brief overview on treatment approaches used in clinical psychology	M4	10
CO5	**Behavioral Health and Psychological Medicine** Relationship between mind and body and its implications for overall health, Behavioral Factors in Health and Illness, Psychological interventions used to promote health and prevent illness, Behavioral Medicine (brief overview) Basic Ethics and Research Methods in Social and Behavioral Sciences.	M5	6

Learning Outcomes / Social and Behavioral Sciences and Basics of Clinical Psychology Course

By the end of this course, students will have developed the following skills and competencies:

Core Concepts: Students will grasp fundamental concepts in social and behavioral sciences and apply key theories to real-world scenarios.

Human Development: Students will understand and describe human development across different life stages, recognizing physical, cognitive, and social changes.

Clinical Psychology: Students will identify major psychological disorders and treatment approaches, and understand clinical assessment techniques.

Health Psychology: Students will analyse the link between psychological factors and physical health, and implement effective psychological interventions.

Research Skills: Students will apply basic research methods and ethical practices to conduct and interpret research in social and behavioural sciences.

Module Number	Content	Total Hours	% of questions	Bloom Level (applicable)	Remarks, if any
M1	**Introduction to Social and Behavioral Sciences**	4	10%	1,2,3	NA
M2	**Social Psychology and Group Dynamics**	10	20%	1,2,3	NA
M3	**Developmental Psychology and Behavior**	10	30%	1,2,3	NA
M4	**Basics of Clinical Psychology**	10	20%	2,3,4	NA
M5	**Behavioral Health and Psychological Medicine**	6	20%	1,2,3,4,5	NA
Total Theory		40	100		
Tutorial		10			
Total		50			

Suggestive Reading:

1. Social and Behavioral Sciences and Basics of Clinical Psychology – Dr. Tamasmita Basu- Taurean Publications.
2. Behavioural Sciences (Psychology and Sociology)- Dr. Victor Devasirvadanam, Selvan M R – Thakur Publications Pvt. Ltd. Lucknow

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Course Name: Health economics
BBA(HM)802

Mode: Offline **Credits: 5(4L+1T)**

Aim of the Course: The aim of this course is to provide students with a comprehensive understanding of health economics, focusing on the application of economic principles to the healthcare sector. The course will explore how economic theories and tools can be used to analyze healthcare markets, assess the efficiency and equity of healthcare delivery, and evaluate the impact of health policies on individuals and populations. Students will learn to critically examine the allocation of healthcare resources, the behavior of healthcare providers and consumers, and the role of government in health economics. By the end of the course, students will be equipped with the skills to apply economic reasoning to address key challenges in healthcare and contribute to the development of effective health policies.

Course Objectives: The objective of this course is to equip students with the knowledge and skills to apply economic principles and methodologies to the analysis of healthcare systems and policies. Students will learn to evaluate the efficiency, equity, and effectiveness of healthcare delivery, understand the dynamics of healthcare markets, and assess the economic impact of health interventions and policies. The course will also cover the behavior of healthcare providers and consumers, the role of government in health economics, and the challenges of resource allocation in healthcare. By the end of the course, students will be prepared to use economic tools to inform decision-making in health policy and management.

Goals:

CO1: Understand Economic Principles in Healthcare: Develop a solid foundation in the economic theories and principles that apply specifically to the healthcare sector.

CO2: Analyze Healthcare Markets: Gain the ability to evaluate the functioning of healthcare markets, including the behavior of providers and consumers, and the impact of market forces on healthcare access and quality.

CO3: Assess Health Policies: Learn to critically assess the economic implications of health policies, interventions, and reforms, focusing on their efficiency, equity, and effectiveness.

CO4: Apply Economic Tools: Equip students with the skills to use economic tools and methodologies to address key challenges in healthcare, including resource allocation, cost-benefit analysis, and policy development.

SI	Course Content	Mapped Module	Hours allotted
CO1	**Fundamentals of Economics:** The Fundamentals of Economics - Economic Organizations Utility, Wealth, Production, Capital-Central Problems of an Economy. Demand and Supply Analysis - meaning, determinants and types of demand, supply meaning, Law of supply, Elasticity of demand (Price, income and cross price), Shifts in Demand and Movement along demand curve, Change in Total Revenue, AR, MR and Price elasticity, Classification of goods: Substitutes and Complements, Short-run and long-run costs, average and marginal costs, total, fixed and variable costs.	M1	15
CO2	**Various forms of markets**:- perfect competition, Monopoly, Monopolistic competition and Oligopoly, Pricing strategies	M2	5
CO3	**Scope and coverage of Health Economics:** Definition, Scope & Objectives, Demand & Supply for Health Services. Health as a private and a public good. Investment in Public & Private Health, Pattern of Health expenditure in India, Health as an investment- Population and Economic Development- Health financing from various sources; Cost Benefit Analysis and Cost Effective Analysis., Input output Analysis Health Care Budget: Purpose, types and practices in Indian context	M3	10
CO4	**Principles of economic evaluation as applied to health care:** Population, Health & Economic Development. HDI: Concept and application. Quality of life and statistics in health economic evaluation including QALY's and DALY's. Economics of Health Programmes for Nutrition Economics of abuse of tobacco & Alcohol Economics of Breast feeding	M4	10

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Learning Outcomes / Skills for Health Economics

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

1. **Apply Economic Theories:** Understand and apply economic theories and principles to analyze healthcare systems, markets, and policies.
2. **Evaluate Healthcare Efficiency:** Assess the efficiency of healthcare delivery and identify areas where resources can be allocated more effectively.
3. **Analyze Healthcare Markets:** Analyze the behavior of healthcare providers, consumers, and payers, and understand the impact of supply and demand on healthcare access and costs.
4. **Conduct Cost-Benefit Analysis:** Perform cost-benefit analyses of health interventions and policies to determine their economic viability and impact on population health.
5. **Understand Equity in Healthcare:** Evaluate the equity implications of healthcare policies and practices, focusing on how they affect different population groups.
6. **Policy Impact Assessment:** Assess the economic impact of health policies and reforms, understanding their effects on both short-term and long-term health outcomes.
7. **Resource Allocation Skills:** Develop strategies for optimal resource allocation in healthcare, ensuring that limited resources are used to maximize health benefits.
8. **Critically Analyze Health Policies:** Critically analyze current and proposed health policies using economic reasoning, and provide informed recommendations.
9. **Use Data and Tools:** Utilize economic tools, data analysis, and modeling techniques to address complex issues in health economics and inform policy decisions.
10. **Communicate Economic Insights:** Effectively communicate complex economic concepts and analyses to diverse audiences, including policymakers, healthcare professionals, and the public.

Module Number	Content	Total Hours	% of questions	Bloom Level (applicable)	Remarks, if any
M1	**Fundamentals of Economics**	15	30%	1,2	NA
M2	**Various forms of markets**	5	20%	1,2,3	NA
M3	**Scope and coverage of Health Economics**	10	30%	1,2,3	NA

M4	**Principles of economic evaluation as applied to health care**	10	20%	1,2,3	NA
Total Theory		40	100		
Tutorial		10			
Total		50			

Suggested reading:

1. “Health Economics” – Dr. Madhurima Kundu, Sovik Mukherjee – Taurean Publications
2. "Health Economics" by Charles E. Phelps
3. "The Economics of Health and Health Care" by Sherman Folland, Allen C. Goodman, and Miron Stano
4. "Health Economics and Policy" by James W. Henderson

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Paper Name: HOSPITAL MANAGEMENT INFORMATION SYSTEM
Paper code: BBA(HM) 701

Mode: Offline **Credits: 5(4L+1T)**

Aim of the Course: The objective is to attain a comprehensive understanding of hospital management.

Course Objectives: The course is designed to foster comprehension of the core principles, theories and applications of quality in hospital and healthcare Industry. It also covers operational aspects. Upon finishing this course, students should have a grasp of the foundational tenets of healthcare management.

Goals:

- CO1: This course equips students with foundational knowledge in Information system in Hospital and Healthcare sector.
- CO2: Through this course, students will gain the ability to harmonize practice with theoretical knowledge in HMIS.
- CO3: The course will facilitate active learning and the acquisition of knowledge regarding emerging trends in Management Information System in Hospital and Healthcare sector.
- CO4: The course is designed to furnish students with decision-making skills by using MIS.
- CO5: Upon completing this course, students will be equipped to detect and assess Decision making and decision Support System.
- CO6: Detail knowledge about HMIS
- CO7: students can have the knowledge about basic management cycles in Hospital
- CO8: System Design and Development in HMIS (SDLC).
- CO9: students can understand Components of Hospital Management Information System.
- CO10: students can gather knowledge about the Implementation and Management of HMIS

Sl	Course content	Mapped Module	Hours allotted
CO1	**1. Basic introduction to MIS** • Concepts of Data and information • Difference between Data and information • Evaluation and meaning of MIS • Definition, dimensions (quality, value, age and cost) and importance, • Formal and Informal Information.	M1	2
CO2	**2. Information system for competitive advantage** • Concepts of management and organization theory • Levels of management • Hierarchy of management activity • Different types of decisions • Structured and unstructured decisions • Information requirements by level of management.	M2	4
CO3	**3. Systems approach to problem solving** ▪ Concepts of System ▪ Types of Systems ▪ Deterministic and Probabilistic System ▪ Close and Open System ▪ Human-Machine Systems ▪ Information System (CBIS) ▪ Scope of CBIS	M3	4
CO4	**4. Evolution and development of MIS.** • Types of CBIS • Electronic Data Processing (EDP) • Accounting information system (AIS) • Office Automation System (OAS) • Transaction Processing System (TPS), • Management Information System(MIS)		4

	• Decision Support System (DSS) • Executive Information System (ElS) • Knowledge based System (KBS) • Expert System (ES)		
CO5	**5. DECISION MAKING & DECISION SUPPORT SYSTEM** 5.1. Decision Making Process • Phases of Decision-Making Process • Intelligence and Design Phases 5.2. Stages in Decision Making 5.3 Individual and Organizational Decision Making Models • Group Decision Support Systems ➢ Characteristics of GDSS ➢ Types of Group Decision Support Systems • Decision Making Models 5.4 Decision Support System • Definition & Relationship with MIS ➢ Decision Making ✓ Programmed decisions ✓ Non-programmed decisions • Management Information Systems ➢ Characteristics of an MIS • Difference between MIS and DSS • Evolution of DSS ➢ Decision Making Tools ➢ Effectiveness vs. Efficiency 5.5 Characteristics, Classification, Objectives & Components of DSS • Characteristics of DSSs • Classification • Objectives • Components of a DSS System 5.6 Functions and Development of DSS Function		8
CO6	**6. Introduction to Hospital Management Information Systems** • Definition and Purpose of HMIS • Scope of HMIS • Importance of Information Systems in Healthcare • Evolution of HMIS • Types of HMIS (Administrative, Clinical, Financial) • Role of HMIS in Hospital Operations		2
CO7	**7. Basic management cycles in hospitals** • categories of information system in hospitals, • sources of health information, • uses of health and hospital data, • managing information system, and • need of information in hospital.		4
CO8	**8. System Design and Development in HMIS (SDLC)** • System Development Life Cycle (SDLC) for HMIS • System Analysis and Design in Healthcare • Requirements Analysis and Specification • Data Flow Diagrams, Entity Relationship Diagrams • Examples of Software and Tools Used in HMIS Development (basic knowledge)		4

CO9	**9. Components of Hospital Management Information System** • Patient Management System • Laboratory Information System (LIS) • Radiology Information System (RIS) • Pharmacy Information System (PIS) • Billing and Financial Information Systems • Human Resource and Payroll Systems • Supply Chain Management in Healthcare		4
CO10	**10. Implementation and Management of HMIS** • HMIS Implementation Process • Change Management in Hospitals • User Training and Support • Monitoring and Evaluating HMIS Performance • Challenges and Best Practices in HMIS Implementation		4

Books:

1. Basics of Healthcare Analytics – Biswarup Dey – Taurean Publications
2.Management Information Systems, O'Brien , TMH
3. Management Information Systems, Arora & Bhatia , EXCEL BOOKS
4. Management Information Systems.M.M.Oka.EPH.

Learning Outcome/ Skills:

Hospitals are complex organizations with intricate structures. Student will study how different departments and functions within a hospital interact, and how the organizational structure affects decision-making and efficiency.

Module Number	Content	Total Hours	% of questions	Bloom Level (applicable)	Remarks, if any
THEORY					
M1	**Basic introduction to MIS**	2	**5**	**1,2**	**NA**
M2	**Information system for competitive advantage**	4	**10**	**1,2,3**	**NA**
M3	**Systems approach to problem solving**	4	**10**	**1,2**	**NA**
M4	**Evolution and development of MIS**	4	**10**	**1,2,3**	**NA**
M5	**DECISION MAKING & DECISION SUPPORT SYSTEM**	8	**20**	**1,2,3**	**NA**
M6	**Introduction to Hospital Management Information Systems**	2	**5**	**1,2,3**	**NA**
M7	**Basic management cycles in hospitals**	4	**10**	**1,2,3**	**NA**

M8	**System Design and Development in HMIS (SDLC)**	4	**10**	**1,2,3**	**NA**
M9	**Components of Hospital Management Information System**	4	**10**	**1,2,3**	**NA**
M10	**Implementation and Management of HMIS**	4	**10**	**1,2,3**	**NA**

Total Theory	**40**	**100**		
TUTORIAL	**8**			
TOTAL	**48**			

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Paper Name: RESEARCH METHODOLOGY IN HEALTHCARE SYSTEM
Paper code: BBA(HM) 702

Mode: Offline **Credits: 5(4L+1T)**

Aim of the Course: The objective is to attain a comprehensive understanding of hospital management.

Course Objectives: The course is designed to foster comprehension of the core principles of hospital management. It also covers operational aspects. Upon finishing this course, students should have a grasp of the foundational tenets of healthcare management.

Goals:

- CO1: This course equips students with foundational knowledge in Quality Management in Hospital and Healthcare sector.
- CO2: Through this course, students will gain the ability to harmonize practice with theoretical knowledge in quality management.
- CO3: The course will facilitate active learning and the acquisition of knowledge regarding emerging trends in Quality management and Total Quality Management.
- CO4: The course is designed to furnish students with decision-making skills relevant to Quality in Health care sector.
- CO5: Upon completing this course, students will be equipped to detect and assess Quality challenges and possibilities in practical settings.

Sl	Course content	Mapped Module	Hours allotted
CO1	**Introduction to Research:** The concept of research, characteristics of good research, Application of Research, Meaning and sources of Research problem, characteristics of good Research problem, Research process, outcomes, application of Research, Meaning and types of Research hypothesis, Importance of Review of Literature, Organizing the Review of Literature.	M1	6
CO2	**Types of Research:** Types of research, pure (basic, fundamental) and applied research, qualitative and quantitative. **Research Design** : Meaning, need, types of research design – Exploratory, Descriptive, Casual research Design, Components of research design, and Features of good Research design. Experiments, surveys and case study Research design.	M2	10
CO3	**Sampling, Data Collection and analysis** : Types and sources of data – Primary and secondary, Methods of collecting data, Concept of sampling and sampling methods – sampling frame, sample, characteristics of good sample, simple random sampling, purposive sampling, convenience sampling, snowball sampling, classification and tabulation of data, graphical representation of data, graphs and charts – Histograms, frequency polygon and frequency curves, bell shaped curve and its properties.	M3	8
CO4	**Statistical Methods for Data Analysis**: Applications of Statistics	M4	6

	in Research, measures of central tendency and dispersion		
CO5	**Research Report:** Research report and its structure, journal articles – Components of journal article. Explanation of various components. Structure of an abstract and keywords. Thesis and dissertations. components of thesis and dissertations. Referencing styles and bibliography.	M5	6
CO6	**Ethics in Research** - Plagiarism - Definition, different forms, consequences, unintentional plagiarism, copyright infringement, collaborative work. Qualities of good Researcher.	M6	4

Learning Outcome/ Skills:

Hospitals are complex organizations with intricate structures. Student will study how different departments and functions within a hospital interact, and how the organizational structure affects decision-making and efficiency.

Module Number	Content	Total Hours	% of questions	Bloom Level (applicable)	Remarks, if any
THEORY					
M1	**Introduction to Research**	6	**15**	**1,2**	**NA**
M2	**Types of Research**	10	**25**	**1,2,3**	**NA**
M3	**Sampling, Data Collection and analysis**	8	**20**	**1,2**	**NA**
M4	**Statistical Methods for Data Analysis**	6	**15**	**1,2,3**	**NA**
M5	**Research Report**	6	**15**	**1,2,3**	**NA**
M6	**Ethics in Research**	4	**10**	**1,2,3**	**NA**
Total Theory		**40**	**100**		
TUTORIAL		**8**			
TOTAL		**48**			

RECOMMENDED BOOKS:

1. Research Methodology in Healthcare System – Anis Chattopadhyay – Taurean Publications
2. Research Methodology – C.R. Kothari – New Age International Publishers

Course Name: Health Insurance
BBA(HM)703

Mode: Offline **Credits: 4(3L+1T)**

Aim of the Course: The aim of this course is to provide students with a comprehensive understanding of health insurance, including its principles, types, and the role it plays in the healthcare system. The course will explore the structure and function of health insurance plans, the regulatory environment, and the economic and social implications of health insurance policies. Students will learn how to analyze different health insurance products, understand the claims process, and evaluate the impact of health insurance on access to healthcare and financial protection. By the end of the course, students will be equipped to navigate the complexities of health insurance and make informed decisions in both professional and personal contexts.

Course Objectives: The objective of this course is to equip students with a thorough understanding of health insurance, focusing on the various types of insurance plans, their design, and their impact on healthcare access and affordability. Students will learn about the regulatory framework governing health insurance, the process of underwriting and claims management, and the role of health insurance in financial risk protection. Additionally, the course will cover the evaluation of insurance products, the analysis of policy options, and the ethical considerations involved in health insurance. By the end of the course, students will be prepared to critically assess health insurance plans and contribute effectively to the healthcare and insurance industries.

Goals: Health Insurance

CO1: Master Health Insurance Fundamentals: Gain a deep understanding of the core principles, types, and operations of health insurance plans.

CO2: Evaluate Insurance Plans: Develop the ability to critically assess and compare various health insurance products for different demographic and healthcare needs.

CO3: Understand Regulatory Compliance: Learn to navigate and apply the regulatory requirements governing health insurance to ensure compliance and protect consumer rights.

CO4: Enhance Financial Security: Understand the importance of health insurance in safeguarding individuals and families from financial hardships related to healthcare expenses.

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SI	Course Content	Mapped Module	Hours allotted
CO1	**Introduction and Scope** Introduction to insurance: Define health insurance, Importance of health insurance, types of Health insurance, History and Evolution of Insurance in India, Principles of insurance, Insurance documentation, Difference between insurance and assurance, difference between life insurance and health insurance, difference between insurance and reinsurance.	M1	10
CO2	**Concept of Risk and Managed care:** Concept of Asset, Risk & Pooling. Insurance for the Patient, Premium and factors influencing premium for various policies, concept of copayment. Managed Care: The Key "Ingredients" of Managed Care, Health insurance products, Professional Indemnity Schemes for doctors, Medical Care system & Health Insurance System in different countries (USA, UK, India) Role of Insurance in Economic Development of a country	M2	10
CO3	**Government models of Health Insurance:** Social security Schemes in India– CGHS, ESI, • Insurance schemes: RSBY, JSY, Pradhan Mantri Suraksha Bima Yojana, Swastha sathi	M3	5
CO4	**Insurance regulatory authority:** Insurance Regulatory Authority of India (IRDA): Role, function and Control • Third Party Administration-Function, Importance & Challenges, • TPA: Intermediary between provider & Patient, Role of Health Insurance companies	M4	5

Learning Outcomes / Skills for Health Insurance

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

1. **Comprehend Health Insurance Concepts:** Understand the key principles, types, and structures of health insurance plans, including private and public options.
2. **Policy Analysis:** Analyze and compare different health insurance policies to determine their benefits, coverage options, and suitability for various populations.
3. **Regulatory Knowledge:** Demonstrate knowledge of the legal and regulatory frameworks governing health insurance, including compliance with national and international laws.
4. **Claims Management:** Understand the processes involved in health insurance claims, from submission to adjudication, and effectively manage and resolve claims issues.
5. **Risk Assessment:** Assess the risks associated with different health insurance plans and develop strategies to mitigate these risks for both insurers and insured individuals.
6. **Financial Acumen:** Evaluate the financial aspects of health insurance, including premium calculations, cost-sharing mechanisms, and the impact on healthcare affordability.
7. **Consumer Advocacy:** Advocate for consumers by ensuring they have access to clear, accurate information about health insurance options and can make informed decisions.

8. **Ethical Decision-Making:** Apply ethical principles in the design, sale, and management of health insurance products, ensuring fairness and equity in coverage and access.
9. **Effective Communication:** Develop skills to effectively communicate complex health insurance concepts to diverse audiences, including consumers, employers, and policymakers.
10. **Adaptation to Market Changes:** Stay informed about trends and changes in the health insurance market and adapt strategies to meet evolving consumer needs and regulatory requirements.

Module Number	Content	Total Hours	% of questions	Bloom Level (applicable)	Remarks, if any
M1	**Introduction and Scope**	10	30%	1,2	NA
M2	**Concept of Risk and Managed care**	10	30%	1,2,3	NA
M3	**Government models of Health Insurance**	5	20%	1,2,3	NA
M4	**Insurance regulatory authority**	5	20%	1,2,3	NA
Total Theory		30	100		
Tutorial		10			
Total		40			

Suggested reading:

1. Health insurance: Anindita Sarkar, Nimai Chandra Chaudhuri, Taurean Publication
2. Commercial Laws: N. D. Kapoor
3. Commercial Laws: Sen & Mitra

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Paper Name: QUALITY IN HEALTH CARE
Paper code: BBA(HM) 601:

Mode: Offline **Credits: 5(4L+1T)**

Aim of the Course: The objective is to attain a comprehensive understanding of hospital management.

Course Objectives: The course is designed to foster comprehension of the core principles, theories and applications of quality in hospital and healthcare Industry. It also covers operational aspects. Upon finishing this course, students should have a grasp of the foundational tenets of healthcare management.

Aim of the Course: The objective is to attain a comprehensive understanding of hospital management.

Course Objectives: The course is designed to foster comprehension of the core principles of hospital management. It also covers operational aspects. Upon finishing this course, students should have a grasp of the foundational tenets of healthcare management.

Goals:

- CO1: This course equips students with foundational knowledge in Quality Management in Hospital and Healthcare sector.
- CO2: Through this course, students will gain the ability to harmonize practice with theoretical knowledge in quality management.
- CO3: The course will facilitate active learning and the acquisition of knowledge regarding emerging trends in Quality management and Total Quality Management.
- CO4: The course is designed to furnish students with decision-making skills relevant to Quality in Health care sector.
- CO5: Upon completing this course, students will be equipped to detect and assess Quality challenges and possibilities in practical settings.

Sl	Course content	Mapped Module	Hours allotted
CO1	**Evolution of Quality and quality management**	M1	2
CO2	**Fundamentals of Quality Management**: Introduction - Objectives - Concept of Quality Care and Quality Management, Dimensions of quality in health care Contribution of quality gurus: Joseph M. Juran, W. Edward Deming, Genechi Taguchi, Armand V. Feignbaum, Kauro Ishikawa, Philip B. Crosby, Walter Shewhart	M2	6
CO3	**Implementing Quality Management system in a Hospital**: Improving Hospital Performance - Conceptual model of potential Contribution in quality in the health care system-Implementation of quality management system in improving health care system, Quality Circle.	M3	4
CO4	**Implementing Total Quality Management in an Organization:** Introduction-organizing for quality assessment—Quality Assurance and quality improvements	M4	6
CO5	**Ways to improve quality of service in Hospitals: Definition, Tools and techniques of quality improvement.**: underlying concepts, implementation and measurement of TQM, Role of communication in implementing TQM Six Sigma, Lean Thinking, Kaizen, 5 S (theoretical knowledge only)	M5	3
CO6	**Relationship between Patient, Doctor and Hospital**: Patient Centric Approach, Patient Participation - Quality Health Care through Patient Satisfaction. Some attributes of a Good Patient Practitioners Relationship - The measurement of Quality.	M6	4
CO7	**Assessment of Quality Health care:** Some attributes of Quality in Health Care -Procedure for formulating explicit Criteria and standards - Determinants of Quality - Structure - Process - Outcome.	M7	3
CO8	**Accreditation in Hospital and Health care Facilities-Improvement of Quality of service through different approaches:** Different Approaches to Quality improvement Quality planning, Quality Implementation and Quality Evaluation, Quality Manual, Benchmarking, QCI (functions, structure)	M8	10

	Fundamentals of IS0 9001:2000 (objectives and components), Accreditation -with special emphasis on NABH, NABL Accreditation and JCI (sequential process of getting certified)		
CO9	**Quality and service Management:** Service Management and Gaps	M9	2

Learning Outcome/ Skills:

Hospitals are complex organizations with intricate structures. Student will study how different departments and functions within a hospital interact, and how the organizational structure affects decision-making and efficiency.

Module Number	Content	Total Hours	% of questions	Bloom Level (applicable)	Remarks, if any
THEORY					
M1	**Evolution of Quality and quality management**	2	**5**	**1,2**	**NA**
M2	**Fundamentals of Quality Management**	6	**15**	**1,2,3**	**NA**
M3	**Implementing Quality Management system in a Hospital**	4	**10**	**1,2**	**NA**
M4	**Implementing Total Quality Management in an Organization:**	6	**15**	**1,2,3**	**NA**
M5	**Ways to improve quality of service in Hospitals:**	3	**7**	**1,2,3**	**NA**
M6	**Relationship between Patient, Doctor and Hospital**	4	**10**	**1,2,3**	**NA**
M7	**Assessment of Quality Health care:**	3	**8**	**1,2,3**	**NA**
M8	**Accreditation in Hospital and Health care Facilities-Improvement of Quality of service through different approaches:**	10	**25**	**1,2,3**	**NA**
M9	**Quality and service Management:**	2	**5**	**1,2,3**	**NA**
Total Theory		**40**	**100**		
TUTORIAL		**8**			
TOTAL		**48**			

Books:

1. **"Managing Quality in Healthcare Organization"**–Abhijeet Sinha–Taurean Publication.
2. **"The Healthcare Quality Book: Vision, Strategy, and Tools"** by Maulik Joshi, Elizabeth R. Ransom, David B. Nash, Scott B. Ransom.
3. **"Quality Management in Health Care: Principles and Methods"** by Donald Lighter and Douglas C. Fair.
4. **"Health Care Quality Management: Tools and Applications"** by Thomas K. Ross.

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Paper Name: Public Health & Healthcare Policy
Paper code: BBA(HM) 602

Mode: Offline **Credits: 5(4L+1T)**

COURSE OVERVIEW: This course will equip the students with:

- the skills and knowledge to apply to public health concerns at local, national and international level;
- the ability to apply relevant theory and scientific principles to practical situations;
- the capability of understanding various public health policies.

LEARNING OBJECTIVES:

By the end of this course students will develop the ability to:

1. Identify the core components and functions of public health systems at local, national, and global levels.
2. Describe the roles and responsibilities of various stakeholders, including government agencies, non-governmental organizations, and community groups.
3. Assess the values and perspectives of diverse individuals, communities, and cultures, and describe how these factors influence health behaviors, choices, and practices.
4. Engage in collaborative, team-based, and interdisciplinary approaches for improving population health.
5. Identify public health tools and evidence-based strategies to respond to public health issues in a global world.

Sl.	Topic/Module	Hour
1.	Module 1: Introduction- Definition, Significance, Evolution & Development of Public & Community Health, Scope of Public health Epidemiological basis for healthcare management, Right to health, Responsibilities of Health, Community Participation. Epidemiological methods, Levels of prevention and Concept of screening	10
2.	Module 2: Globalization and Health, Role of Public Healthcare Institutions in Global Health System, Emergency, Disaster Preparedness and Response activities, Strengthening Healthcare Systems to Improve Health Outcomes: Reference to High, Low and Middle Income Countries	10

3.	Module 3: Introduction to health systems in India, Organization & Management of Public Healthcare Delivery system in India: National, State, District and Block Level Health Sector Reforms in India: Development Partners in Public health, Public-Private partnership, M-Health/ E-Health	10
4.	Module 4: Health Education and Communication- Principles & Objectives, Levels of Health Education, Educational Methods, Evaluation & Practice of Health Education in India, Health Counseling: Introduction, Theories, Process & Techniques Heath Communication: Basic Concept & Principles of Communication, Definition, Purpose, Types of Communication	10
5.	Module 5: Sustainable Development Goals, Healthcare through Five Year Plans and National Health Policies, National Health Policy 1983, NHP 2002, NHP 2017, National Population Policy, Ayushman Bharat Yojana, National Iron Plus Initiative for Anaemia Control, National Vector Borne Disease Control Programme (NVBDCP), Pulse Polio Programme, National Programme for the Health Care for the Elderly (NPHCE) National Programme for Prevention & Management of Burn Injuries (NPPMBI), National Oral Health programme, International organizations- WHO, UNICEF, World Health Assembly (WHA), Global Health Initiatives	10

Suggested Readings:

- Health Education and Health Communication, Anindita Sarkar, Taurean Publishers
- Public Health and Healthcare Policy – Dr. Madhurima Kundu – Taurean Publications
- Community Medicine, AH Suryakantha - JAYPEE
- Preventive and Social Medicine, K.Park
- The Hospital Administrator, MA George-JAYPEE
- Management of Hospitals— Goel & Kumar-Deep & D

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Course Name: Occupational health and hazards
BBA(HM)603

Mode: Offline Credits: 4(3L+1T)

Aim of the Course: The aim of this course is to provide an in-depth understanding of occupational health and safety, with a focus on identifying, assessing, and managing workplace hazards. The course seeks to equip students with the knowledge and skills necessary to promote and maintain a healthy work environment, prevent work-related illnesses and injuries, and ensure compliance with occupational safety regulations. Through this course, students will learn to develop effective health and safety strategies that protect workers and enhance overall workplace well-being.

Course Objectives: The objective of this course is to equip students with a comprehensive understanding of occupational health and safety, focusing on the identification, assessment, and management of workplace hazards. Students will learn to ensure compliance with relevant health and safety regulations, prevent occupational diseases, and promote a culture of safety within organizations. The course aims to develop the skills necessary for effective risk assessment, emergency preparedness, and the implementation of health and safety management systems, while also emphasizing the ethical responsibilities and continuous improvement in workplace safety practices.

Goals:
CO1: **Enhance Workplace Safety:** Develop strategies to identify, assess, and mitigate workplace hazards, ensuring a safer working environment for all employees.
CO2: **Promote Health and Well-being:** Implement programs and practices that support the physical and mental health of workers, reducing the risk of occupational diseases and injuries.
CO3: **Ensure Regulatory Compliance:** Ensure adherence to occupational health and safety regulations, maintaining legal and ethical standards within the workplace.
Co4: **Foster a Safety Culture:** Cultivate a workplace culture that prioritizes health and safety, encouraging proactive risk management and continuous improvement in safety practices.

SI	Course Content	Mapped Module	Hours allotted
CO1	**Introduction and Scope** WHO/ILO Definition of Occupational Health, Fundamentals and Practices of Occupational Health and Environmental Safety Management Typical Occupational Illnesses: Common occupational illness, Workplace Health Management Services, Pre-Employment and Routine Medical Examinations, Disease Prevention through Medical Surveillance, and Maintenance of Health Records	M1	10
CO2	**Environment Hazards and control system:** Occupational Health and Environment Safety Management System, ILO and EPA Standards. Industrial Hygiene: Definition of Industrial Hygiene, Control Methods, waste disposal, control measures. Chemical Hazard: Introduction to chemical hazards, dangerous properties of chemical, dust, gases, fumes, mist, Vapours, Smoke and aerosols. Route of entry to human system, recognition, evaluation and control of basic hazards. Environmental Hazards: Introduction to Air pollution. Its impact on health, Water pollution and its impact on health, soil and land pollution its impact on health. Control procedures.	M2	10
CO3	**Occupational Health and Environmental Safety Education:** Occupational Health Hazards: Hazards related to healthcare institutions. Recommended safety measures, Fire hazards and safety measures. Disaster management, pre-disaster and post disaster preparation, Triage. Ergonomics-Introduction, Definition, Objectives, Advantages. Ergonomics Hazards.	M3	10
CO4	**Safety standards:** Bureau of Indian standards on safety and health 14489 - 1998 and 15001 – 2000, OSHA, Process Safety Management (PSM) as per OSHA, PSM principles, OHSAS – 18001, Performance	M4	10

	measurements to determine effectiveness of PSM, Importance of Industrial safety, role of safety department, Safety committee and function, Role and responsibilities of safety officer		

Learning Outcomes / Skills for Occupational Health and Hazards

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

1. **Hazard Identification and Assessment:** Skilfully identify potential workplace hazards and assess their impact on worker health and safety.
2. **Risk Management:** Develop and implement effective risk management strategies to minimize or eliminate workplace hazards.
3. **Regulatory Knowledge:** Demonstrate a thorough understanding of occupational health and safety regulations and apply them to ensure workplace compliance.
4. **Occupational Disease Prevention:** Design and manage programs aimed at preventing common occupational diseases and maintaining employee health.
5. **Safety Management Systems:** Implement and manage comprehensive occupational health and safety management systems within various organizational contexts.
6. **Emergency Response Planning:** Create and execute emergency response plans to handle workplace incidents and health emergencies effectively.
7. **Health Surveillance:** Conduct and interpret pre-employment and periodic medical examinations, and manage ongoing medical surveillance to monitor worker health.
8. **Communication and Training:** Effectively communicate occupational health and safety information and conduct training programs to educate workers and management.
9. **Ethical Decision-Making:** Apply ethical principles in making decisions related to occupational health and safety, ensuring fair and just treatment of workers.
10. **Continuous Improvement:** Foster a culture of continuous improvement by regularly reviewing and updating health and safety policies, procedures, and practices based on new information and changing workplace conditions.

Module Number	Content	Total Hours	% of questions	Bloom Level (applicable)	Remarks, if any
M1	**Introduction and Scope**	10	30%	1,2	NA
M2	**Environment Hazards and control system**	10	30%	1,2,3	NA
M3	**Occupational Health and Environmental Safety Education**	10	20%	1,2,3	NA
M4	**Safety standards**	10	20%	1,2,3	NA
Total Theory		40	100		
Tutorial		00			
Total		40			

Suggested reading:

1. **Occupational Health and Hazards- Anindita Sarkar – Taurean Publications**

2. **Handbook of Occupational Safety and Health**

Editor(s):
S. Z. Mansdorf
First published:29 March 2019
Print ISBN:9781118947265 |Online ISBN:9781119581482 |DOI:10.1002/9781119581482

2. Fundamentals of Occupational Safety and Health by Mark A. Friend and James P. Kohn
3. Occupational Safety and Health in the Emergency Services includes Navigate Advantage Access by James S. Angle

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5TH SEMESTER

Paper Name: Support Utility Services-II
Paper Code: BBA(HM) – 501
Total Credit: 5
Total hours of lectures: 50 hours

Mode: Offline **Credits: 5(4L+1T)**

BBA(HM) – 501

Aim of the Course: The aim is to achieve knowledge of the fundamentals of Support and utility services 2 and its practical application in the hospital operations.

Course Objectives: Understand the support system studying that allows us the ability to optimize and digitize all the processes within the hospitals.

Goals:

CO1: This course enables students to gain preliminary knowledge about the ability to optimize and digitize all the processes within the hospitals.

CO2: Demonstrate the different departments that are there in the hospital there work flow structure etc.

CO3: Envisage to know how the organizational hierarchy is important to properly manage the departments using the administrative point of view.

CO3: Would enable the students to have a vivid knowledge about the disaster management system.

Learning Outcome/ Skills:

Sl	Course content	Mapped modules	Hour allotted
1	Module 1: Clinical services: Functions, location, work flow, physical facilities, design & space requirement, staffing, equipment, managerial issues of the following departments - Ward management Intensive care unit Nursing Services	**M1**	**10**
2	Module 2: Support services: Functions, location, work flow, physical facilities, design & space requirement, staffing, equipment, managerial issues of the following departments – Blood Bank Pharmacy Physical medicine and rehabilitation	**M2**	**10**
3	Module 3: Utility services: Functions, location, work flow, physical facilities, design & space requirement, staffing, equipment, managerial issues of the following departments – Transport service Maintenance management Mortuary	**M3**	**10**

4	Module 4: Disaster Management-Types, Disaster Preparedness Plan, Disaster cycle, Triage Fire Hazards and Fire Manual Guideline-Elements of Fire-Fire Hazard-Cause of Hospital Fire- Fire points and Escape route	**M4**	**10**

Upon completing the Support and Utility Services-II course, students will gain the following essential skills:

1. Understanding the role and importance of support and utility services in healthcare delivery.
2. Defining support and utility and clinical services and recognizing their various types.
3. Familiarity with different departments, characteristics, and ownership.
4. Efficiently knowing the workflow of the various departments.
5. Embracing the different functionality of the various departments.
6. Complying with the utility services found in any health care organization.
7. Organizing and managing the disaster manual and preparedness plan effectively.
8. Understanding the guidelines used during the occurrence of any disaster for quality improvement.

Module Number	Content	Total Hours	% of questions	Bloom Level (applicable)	Remarks, if any
THEORY					
M1	Different Clinical Services	**10**	**30**	**1,2**	**NA**
M2	Different Support Services	**10**	**35**	**1,2,3**	**NA**
M3	Different Utility Services	**10**	**20**	**1,2**	**NA**
M4	Disaster Management Systems	**10**	**15**	**1,2,3**	**NA**
Total		**40**	**100**		
Theory		**10**			
TOTAL		**50**			

Books:

1. Support and Utility Services – Ankita Basak – Taurean Publications.
2. Hospital Administration – D.C Joshi and Mamta Joshi – Jaypee Brothers

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Paper Name: Epidemiological Transition in Healthcare
Paper Code: BBA (HM) – 502
Total Credit: 5
Total hours of lectures: 50 hours

COURSE OVERVIEW: This course introduces the student to the principles and basic methods of modem epidemiology. Presentation of epidemiologic data and basic measures of disease frequency are covered. Descriptive, analytical and interventional study designs are discussed in context to the health system along with the concept of risk and its associated measures is also covered. It also focuses on the epidemiology of communicable and non communicable diseases.

LEARNING OBJECTIVES:

By the end of this course students will develop the ability to:

1. Explain the role of epidemiology in the field of healthcare.
2. Understand the epidemiological transitions of various disease.
3. Describe the range of epidemiologic study designs used to examine the health status of a population and be able to evaluate the strengths and limitations of each.
4. Demonstrate various types of dynamics of disease causation, transmission and prevention
5. Examine various roles of Levels of healthcare in prevention of Epidemics.

Sl.	Topic/Module	Hour
1.	Module 1: Concept of Epidemiological transitions in healthcare, Definition of epidemiology, Concept, Principles of epidemiology, Health-dimension, determinants, Wellbeing, Indicators of health, PQI, HDI, QALY, DALY, Positive health, Spectrum of health, Concept of Health gap, Health for All, SDGs	10

2.	Module 2: Concept of disease, Concept of disease causation, Natural History of disease, Iceberg phenomenon of disease, Epidemiological triad, Web of causation, Disease elimination and eradication Mode of Intervention	10
3.	Module 3 : Infectious Disease Epidemiology (Epidemic, Endemic, Pandemic, Sporadic) Basic Measurements of Epidemiology (Mortality, Morbidity), Dynamics of disease transmission Control Epidemiological Methods: Observational, Analytical, Experimental (Basic knowledge only), Levels of Prevention Investigation of an Epidemic Role of Immunization in Preventive care	10
4.	Module 4: Epidemiology of Communicable diseases Influenza, Chicken Pox, Mumps, Measles, Rubella, SARS, Tuberculosis, Viral hepatitis, Cholera, Typhoid fever, Dengue, Malaria, Yellow fever, Japanese Encephalitis, Leprosy, STD, AIDS, Tetanus	10
5.	Module 5: Epidemiology of Non communicable diseases Diabetes, Obesity, Stroke, Cancer, Rheumatic heart diseases, Hypertension, Angina, Myocardial infarction, Cardiac failure, Thyroid, PCOS	10

Books:

1. Epidemiological transition in Healthcare – Dr. Tamasmita Basu – Taurean Publication
2. Park's Textbook of Preventive and social medicine – K Park- Bhanot Publisher

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Semester-IV

Course Name: SUPPORT & UTILITY SERVICES-I
BBAHM 401 (MAJOR)

Mode: Offline **Credits: 5(4T+1T)**

Aim of the Course: The aim of the course on support and utility services in a hospital is to provide participants with a comprehensive understanding and practical skills necessary to manage and optimize non-clinical functions critical to the smooth operation of a healthcare facility.

Course Objectives: This course aims to provide students with comprehensive insights into diverse facets of hospital management. Topics covered include the significance of effective management, key functions such as policies and procedures, equipping facilities, control mechanisms, coordination strategies, communication protocols, staffing considerations, reporting practices, and documentation requirements for both clinical and non-clinical services within a hospital setting. Through this holistic exploration, students will develop a well-rounded understanding of the intricacies involved in managing various aspects of healthcare services, ensuring they are well-equipped to navigate the complex dynamics of hospital administration.

Goals:

CO1: This course enables students to Gain a comprehensive understanding of the importance and scope of support services within a hospital, including functions such as housekeeping, maintenance, security, and catering.

CO2: Familiarize students with the policies and procedures governing support and utility services in a healthcare setting, emphasizing compliance with regulations and industry standards.

CO3: Develop skills in managing resources efficiently, including personnel, equipment, and facilities, to ensure the smooth operation of support services.

CO4: Learn methods for maintaining high standards of quality in support services, with a focus on enhancing the overall patient experience and satisfaction.

CO5: Enhance problem-solving and decision-making skills relevant to the challenges faced in managing support and utility services within a hospital.

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Sl	Course content	Mapped Module	Hours allotted
CO1	Support and utility services: Concept & Meaning & importance Difference between support and utility services	M1	8
CO2	Support services: Functions, Physical facilities, Staffing and Managerial issues of the following departments: Radiology Diagnostic and therapeutic department CSSD Nuclear Medicine Nursing Services Blood Bank: Blood donation, labelling, transfusion reactions, legal aspects and accreditation. Diet Services Transportation & Ambulance Services: History, Administrative aspects, Basic Life Support (BLS) and Advanced Life support (ALS).	M2	13
CO3	Utility services: Functions, Physical facilities, Staffing and Managerial issues of the following departments: Hospital Linen and Laundry Housekeeping services Mortuary Maintenance & store management,	M3	12
CO4	Hospital Infection control: Basic concept of HAI Causes Mode of transmission Functions of Infection control committee	M4	5
CO5	Hospital Information System and Computer Application	M5	2

Learning Outcome/ Skills:

1. **Holistic Understanding:** Develop a comprehensive understanding of the diverse support and utility services required for the effective functioning of a hospital, encompassing areas such as housekeeping, maintenance, security, catering, and more.

2. **Quality Service Delivery:** Equip participants with the knowledge and skills to maintain high standards of quality in support services, ensuring that patient care is enhanced, and the overall hospital experience is positive for patients, visitors, and staff.

3. **Efficient Resource Management:** Provide insights and strategies for efficiently managing resources, including personnel, equipment, and facilities, to ensure the seamless provision of support and utility services.

4. **Compliance and Regulations:** Familiarize participants with the regulatory frameworks and compliance requirements governing support and utility services in healthcare settings, emphasizing the importance of adherence to standards and guidelines.

5. **Communication and Coordination:** Foster effective communication and coordination skills among participants to facilitate seamless collaboration within and between support service departments, contributing to overall operational efficiency.
6. **Emergency Preparedness:** Prepare participants to handle emergency situations effectively, ensuring the safety and well-being of patients, staff, and visitors during critical incidents.
7. **Technological Integration:** Explore the integration of technology into support and utility services, enabling participants to leverage innovative solutions for enhanced efficiency, tracking performance, and improving overall service delivery.
8. **Environmental Sustainability:** Instill an awareness of the importance of incorporating sustainable practices into support services, aligning with the hospital's commitment to environmental responsibility and social sustainability.
9. **Customer-Centric Approach:** Develop customer service skills tailored to the unique challenges and sensitivities of the healthcare environment, emphasizing the importance of patient satisfaction and positive interactions.
10. **Problem-Solving and Decision-Making:** Enhance participants' problem-solving and decision-making skills, preparing them to address challenges and make informed decisions in the dynamic context of support and utility services in a hospital.

Module Number	Content	Total Hours	% of questions	Bloom Level (applicable)	Remarks, if any
M1	Support and utility services	8	30%	1,2	NA
M2	Support services: Functions, Physical facilities, Staffing and Managerial issues of the following departments	13	30%	1,2,3	NA
M3	Utility services: Functions, Physical facilities, Staffing and Managerial issues of the following departments	12	20%	1,2,3	NA
M4	Hospital Infection control	5	10%	1,2	NA
M5	Hospital Information System and Computer Application	2	10%	2,3	NA
Total Theory		40	100		
Tutorial		8			
Total		48			

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Paper Name: Hospital Inventory & purchase management

Paper code: BBA(HM) 402 (MAJOR)

Mode: Offline **Credits: 4(3L+1T)**

Aim of the Course: The objective is to attain a comprehensive understanding of hospital Inventory management.

Course Objectives: The course is designed to foster comprehension of the core principles of hospital materials, inventory and purchase management. It also covers operational aspects on Inventory, purchase and stores. Upon finishing this course, students should have a grasp of the foundational tenets of Hospital Inventory Management.

Goals:

- CO1: This course equips students with foundational knowledge in Hospital Inventory management.
- CO2: Through this course, students will gain the ability to harmonize practice with theoretical knowledge in Inventory, purchase and stores management
- CO3: The course will facilitate active learning and the acquisition of knowledge regarding emerging trends in inventory control and management
- CO4: The course is designed to furnish students with decision-making skills relevant to purchase management.
- CO5: Upon completing this course, students will be equipped to detect and assess hospital planning challenges and possibilities in practical settings.

Sl	Course content	Mapped modules	Hour allotted
CO1	1. Integrated Materials Management: Need, scope, advantage, concept; Materials Requirement Planning (MRP I) - definition, concept and process of MRP1, problem of MRP1 with or without lead time, bills of materials, product tree; concept of Manufacturing resource planning (MRP2); make or buy decision;	**M1**	**6**
CO2	2. Purchasing Management: Definition, Objective, Purchase system, policy and procedure (Purchasing Cycle), Types of Purchasing/Buying, JIT Purchasing, different 'R's of Purchasing; source selection, vendor development and evaluation and Rating; legal aspects of buying – Contract Act 1872, Sale of Goods Act 1930, Law of Agency. Import Substitution.	**M2**	**8**
CO3	3. Stores Management: Definition, Objective, location & layout of general stores and different Hospital Stores, standardization, Codification, stores system and procedures; stores accounting (FIFO, LIFO, WEIGHTED AVERAGE METHOD, SIMPLE AVERAGE METHOD), Codification, stock verification; disposal of surplus and scrap management – definition of disposal, obsolete and scrap, biomedical waste, types of biomedical waste, objective of disposal management, Collection, segregation, storage and transportation of biomedical waste of Hospital.	**M3**	**10**
CO4	4. Inventory Control: Definition and concept of Inventory. types of inventory, Inventory Control - definition, objectives of inventory control, types of inventory cost. Economic Ordering Quantity; inventory systems. Economic order quantity - types of inventory control systems, basic formula of EOQ, derivation of the basic formula in graphical method, buffer stock, maximum usage rate, minimum usage rate, average usage rate, problems on inventory control – calculation of EOQ, Annual Total Cost, Buffer stock, ROL etc. under simplex method. Selective Control of Materials – ABC, HML, XYZ, VED,FSN, GOLF, SDE, S-OS ANALYSIS, basic knowledge on two bin system, KANBAN	**M4**	**12**
CO5	5. Distribution management (logistics Management)-distribution of materials to various departments & auxiliary services. Exceptional management needs in Healthcare Units: Mgmt. of Blood Bank, Donated Organs, Morgues, Pharmacy.	**M5**	**4**

Learning Outcome/ Skills:

Hospitals are complex organizations with intricate structures. Student will study how different departments and functions within a hospital interact, and how the organizational structure affects decision-making and efficiency.

Module Number	Content	Total Hours	% of questions	Bloom Level (applicable)	Remarks, if any
THEORY					
M1	Introduction to Integrated materials management	**6**	**20**	**1,2**	**NA**
M2	Purchase Management	8	**25**	**1,2,3**	**NA**
M3	Stores Management	10	**20**	**1,2**	**NA**
M4	Inventory Management and control	12	**25**	**1,2,3**	**NA**
M5	Logistics and exceptional Management of Hospital	4	**10**	**1,2,3**	**NA**
Total Theory		**40**	**100**		
TUTORIAL		**8**			
TOTAL		**48**			

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Course Name: Environment & sustainable development
BBAHM 403 (MAJOR)

Mode: Offline **Credits: 4(3L+1T)**

Aim of the course: Environment and Sustainable Development is to provide participants with a comprehensive understanding of the intricate relationship between environmental considerations and the pursuit of sustainable development.

Course Objectives: The course on Environment and Sustainable Development is designed with specific objectives to ensure participants gain a thorough understanding of key concepts and are equipped with practical skills.
Goals:
CO1: Provide students with a thorough understanding of key environmental concepts, challenges, and the principles of sustainable development.
CO2: Foster an interdisciplinary perspective by integrating ecological, social, and economic dimensions in the study of environmental and sustainable development issues.
CO3: Develop critical thinking skills to analyze environmental challenges, evaluate potential solutions, and make informed decisions for sustainable development.
CO4: Increase awareness of international, national, and local policies related to environmental protection and sustainable development, and understand how these policies shape decision-making.
CO5: Equip students with practical skills for the responsible management of natural resources, emphasizing sustainable practices for current and future generations.

Sl	Course content	Mapped Module	Hours allotted
CO1	Concept of Environment: Definition and concept of environment; Types and components of environment (Lithosphere, Atmosphere, Hydropshere, Biosphere); Scope and multidisciplinary nature of the subject; Man-environment relationships; Public awareness – Earth Summits, recent Conventions on climate change	M1	8
CO2	Environmental Education: Goals of environmental education; Environmental education at primary, secondary and tertiary level; Green politics; Concepts and importance of triple bottom line, Environmental movements – The Chipko movement, Silent Valley movement, Narmada Bachaao Andolan, Tehri Dam Conflict Brief outline of the Environment (Protection) Act 1986 & its importance for Hospital Administration. Legislation vs. Social obligation of Hospitals. Role of NGO's like green peace in Environmental protection.	M2	12
CO3	Pollutions and control factors: Air Pollution and Control Factors responsible for causing Air Pollution in Hospitals. Sources & effects of Air pollutants in the Hospital context. Primary & Secondary pollutants, Green House	M3	12

	Effect, depletion of Ozone Layer. Brief discussion on THE AIR (PREVENTION & CONTROL OF POLLUTION) ACT,1989. Water Pollution and Control Brief Discussion on Hydrosphere, natural water, pollutants: their origin and effects, river/lake/ground water pollution, the financial implication of water pollution control and steps required to be taken e.g. Sewerage treatment plant, water treatment plant. Standards and control in relation to the effect of legislation by Central and State Boards for prevention and control of Water Pollution. Land Pollution Brief understanding of lithosphere, pollutants (muncicipal,industrial,commercial,agricultural,hospital,hazardous solid waste); their original effects, collection and disposal of solid waste, recovery & conversion methods in relation to an hospital enterprise with discussion about the financial implication. Noise Pollution: Sources, effects, standards & control		
CO4	Brief outline of the Environment (Protection) Act 1986 & its importance for Hospital Administration. Legislation vs. Social obligation of Hospitals. Role of NGO's like green peace in Environmental protection.	M4	5
CO5	Brief outline on Elements of Ecology; brief discussion on Ecological balance and consequences of change, principles of environmental impact assessment. Environmental Impact Assessment report (EIA), Club of Rome.	M5	3

Learning Outcome/ Skills:

1. **Foundational Knowledge:** Demonstrate a solid understanding of key concepts, principles, and theories related to environmental science and sustainable development.
2. **Interdisciplinary Perspective:** Recognize and appreciate the interconnectedness of environmental issues across various disciplines, including ecology, economics, sociology, and policy.
3. **Critical Thinking and Analysis:** Develop critical thinking skills to analyze complex environmental problems, evaluate potential solutions, and consider ethical implications.
4. **Policy Awareness:** Understand local, national, and global environmental policies and regulations, and assess their impact on sustainable development.
5. **Sustainable Practices:** Apply knowledge of sustainable practices to personal and professional decision-making, considering environmental, social, and economic dimensions.
6. **Climate Change Literacy:** Understand the science of climate change, its causes, impacts, and potential mitigation and adaptation strategies.
7. **Biodiversity Conservation:** Appreciate the importance of biodiversity for ecosystem health and understand strategies for conservation.

8. **Community Engagement:** Develop skills for effective community engagement, recognizing the importance of involving local communities in sustainable development initiatives.
9. **Global Citizenship:** Cultivate a sense of global citizenship and an awareness of one's role in contributing to global sustainability goals.
10. **Advocacy and Communication:** Effectively communicate environmental issues, advocate for sustainable practices, and engage with diverse audiences.

Module Number	Content	Total Hours	% of questions	Bloom Level (applicable)	Remarks, if any
M1	Concept of Environment	8	30%	1,2	NA
M2	Environmental Education	12	30%	1,2,3	NA
M3	Pollutions and control factors	12	20%	1,2,3	NA
M4	Brief outline of the Environment (Protection) Act 1986 & its importance for Hospital Administration. Legislation vs. Social obligation of Hospitals. Role of NGO's like green peace in Environmental protection.	5	10%	1,2	NA
M5	Brief outline on Elements of Ecology	3	10%	2,3	NA
Total Theory		40	100		
Tutorial		8			
Total		48			

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Semester-III

Course Name: MEDICAL RECORD II

BBAHM 301 (MAJOR)

Mode: Offline **Credits: 5(4T+1T)**

Aim of the Course: The aim is to achieve knowledge of the fundamentals of medical records science II and its practical application in the hospital operations.

Course Objectives: Students will understand the importance of accurate and comprehensive medical record documentation to support patient care, quality improvement, and legal purposes. Students are expected to gain the ability of the collection, analysis, and organization of health data, ensuring accuracy and completeness of medical records. Students will become familiar with various coding systems.

Goals:

CO1: This course enables students to gain preliminary knowledge about medical records.

CO2: This course will enable the students to combine practice and theoretical knowledge of coding, indexing, computerization of MR.

CO3: The students of this course will be active learners and develop awareness of retention of medical records and about the various medico legal cases.

CO4: The students will also have a vivid knowledge about the medical audit processes for quality improvement.

Sl	Course content	Mapped Module	Hours allotted
CO1	Medical Record Department: various physical infrastructure and facilities crucial in a medical records department and staffing. Functions of Medical Record Department. Flow of Medical record List the various equipment required in the medical records department. Explain special care to be taken to reserve the safety of records and protect them from insects, termites and prevent them from being exposed to heat, fire, dampness and dust. Reports & returns in Medical Record System.	M1	12

CO2	Maintain professional and medico-legal conduct Consent: Definition, importance Describe the Standard Operating Procedures related to medico- legal conduct.	M2	8
CO3	Basic knowledge of legal aspects of Medical Records: Factories Act, Workmen Compensation Act Consumer Protection Act. ESI and CGHS	M3	10
CO4	Electronic health record and health statistics: Definition and Importance of EHR. Explain the Health Information Management System (HIMS). Define Health statistics, Describe the importance of statistics in healthcare, Describe the various statistical indicators for different departments and hospital.	M4	10

Learning Outcome/ Skills:
Upon completing the Medical Records Science course, students are:
1. Able to review records for completeness, accuracy, and compliance with regulations.
2. Able to understand the process of identification, compile, abstract, and code patient data, using standard classification systems.
3. Able to Plan, develop, maintain, or operate a variety of health record indexes.
4. Able to collect, classify, store, or analyze information.
5. Able to understand the process how to prepare statistical reports, narrative reports, or graphic presentations of information for use by hospital staff, researchers, or other users.
6. Able to assist in managing the department or supervising clerical workers, or controlling activities of personnel in the medical records department.
7. Able to maintain professional behavior, personal attributes and interpersonal relationships with others.
8. Able to utilize medical records for hospital statistics and research.
9. Able to organize and manage the Medical Records Department effectively.
10. Able to Comply with legal aspects of medical records and handling medico-legal cases.

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Module Number	Content	Total Hours	% of questions	Bloom Level (applicable)	Remarks, if any
M1	Medical Record Department	12	30%	1,2	NA
M2	Maintain professional and medico-legal conduct	8	15%	1,2,3	NA
M3	Basic knowledge of legal aspects of Medical Records	10	35%	1,2,3	NA
M4	Electronic health record and health statistics	10	20%	1,2	NA
Total Theory		40	100		
Tutorial		8			
Total		48			

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Paper Name: HEALTH CARE MARKETING

Paper code: BBA(HM) 302 (MAJOR)

Mode: Offline **Credits: 5(4L+1T)**

Aim of the Course: The objective is to attain a comprehensive understanding of hospital management.

Course Objectives: The course is designed to foster comprehension of the core principles of hospital management. It also covers operational aspects. Upon finishing this course, students should have a grasp of the foundational tenets of healthcare management.

Goals:

- CO1: This course equips students with foundational knowledge in Health care Marketing.
- CO2: Through this course, students will gain the ability to harmonize practice with theoretical knowledge in Marketing management
- CO3: The course will facilitate active learning and the acquisition of knowledge regarding emerging trends in marketing management
- CO4: The course is designed to furnish students with decision-making skills relevant to Health care marketing.
- CO5: Upon completing this course, students will be equipped to detect and assess new age marketing challenges and possibilities in practical settings.
- CO6: the course is designed in such a way that after completing the course student can build their career in marketing domain in healthcare and allied industry.

Sl	Course content	Mapped modules	Hour allotted
CO1	Introduction: Definitions and scope of marketing; need, want, demand, Marketing Mix – 4Ps, 7Ps and 4Cs, Evolution of Marketing concepts (Production, Product, Selling, Marketing); Marketing Management Tasks and functions.	**M1**	**6**
CO2	Marketing Environment: Major components of Internal Environment, the micro-environment and macro -environment; SWOT Analysis, PEST Analysis Market Planning and Strategy: Marketing intelligence; SWOT Analysis, PEST Analysis, Marketing plan, Concept of SBU, Choice of Corporate Level Strategy; BCG matrix, Product-Market Grid, Porter's Five Force Model.	**M2**	**6**
CO3	STP (various bases for segmentation) Targeting: Mass marketing, Segment Marketing, Niche Marketing, Micro Marketing, and Customization; Concept of Differentiation and Positioning. USP. Consumer Behavior – definition, objective, 7Os, overview of major factors influencing consumer behavior; consumer decision making process and Marketing Research: Consumer decision-making process, marketingresearch process:	**M3**	**8**
CO4	Product & service: Product Classification, Product and Services differentiation; Product Levels, Product Mix, Product Line Management, product mix decision, Product Life Cycle, New Product Development – definition, reasons, new product development process, Service Marketing: definition and concept of service, continuum of service, major characteristics of service, **SERVQUAL concept. Gap model** Branding Packaging and Pricing: Purpose of branding; Brand Positioning, Brand equity; Packaging and its types – primary, secondary, shipping packages.	**M4, M5**	**7**
CO5	Definition, objective, Methods for pricing a product, different pricing strategy	**M6**	**5**

CO6	Marketing Channels: Channel levels, flows and functions; service sector channels, Channel design decisions; Terms and responsibilities of channel members, evaluating channel members, Channel management decisions, Causes and types of Channel Conflict. Promotion: Promotion Mix (Advertising, Sales Promotion, Personal Selling, Direct Marketing, Publicity & PR), 5M model of Advertising, basic Concept of Digital Marketing, PR, Publicity, Propaganda and Direct Marketing. Personal Selling – Salesmanship, Selling Process, Quality of sales person, Buyer-seller dyadic relationship model.	**M7, M8**	**8**

Learning Outcome/ Skills:

Hospitals are complex organizations with intricate structures. Student will study how different facets of marketing function properly, and how the marketing management affects decision-making and efficiency.

Module Number	**Content**	**Total Hours**	**% of questions**	**Bloom Level (applicable)**	**Remarks, if any**
THEORY					
M1	Introduction to Marketing Management	**6**	**20**	**1,2**	**NA**
M2	Marketing Environment and strategy	6	**20**	**1,2,3**	**NA**
M3	STP and consumer Behaviour	8	**20**	**1,2**	**NA**
M4 and M5	Product & service and Branding	7	**10**	**1,2,3**	**NA**
M6	Pricing	5	**10**	**1,2,3**	**NA**
M7 & M8	Marketing Channels And Promotion:	8	**20**	**1,2,3**	**NA**
Total Theory		**40**			
TUTORIAL		**8**			
TOTAL		**48**			

Graduate Attributes: By the end of the program the students will be able to:

1.Possess the necessary skills and knowledge to effectively navigate and apply hospital management principles.
2. Extrapolate to novel situations and Integration of knowledge in diverse contexts.
3. Integrate information from various sources and combine different ideas to create a comprehensive understanding of a topic.
4. collect, organise, and interpret data from different sources to gain insights and draw meaningful conclusions.
5. Demonstrate adeptness in accessing, evaluating, and leveraging various information sources using ICT.
6. Learn a team-oriented approach.
7. Display the ability to listen attentively, read and write critically, and deliver complicated material to various groups in a clear and coherent manner.
8. To exhibit ethical principles and values while overseeing hospital operations and decision-making.
9. Emphasize the obligation to address societal needs and contribute positively to the community.

Course Name: HOSPITAL OPERATIONS PLANNING

Mode: Offline **Credits: 5(4T+1P)**

BBAHM-101

Aim of the Course: The objective is to attain a comprehensive understanding of hospital management.

Course Objectives: The course is designed to foster comprehension of the core principles of hospital management. It also covers operational aspects. Upon finishing this course, students should have a grasp of the foundational tenets of healthcare management.

Goals:

CO1: This course equips students with foundational knowledge in hospital operation planning.

CO2: Through this course, students will gain the ability to harmonize practice with theoretical knowledge in hospital operation planning.

CO3: The course will facilitate active learning and the acquisition of knowledge regarding emerging trends in health planning.

CO4: The course is designed to furnish students with decision-making skills relevant to Health care planning.

CO5: Upon completing this course, students will be equipped to detect and assess hospital planning challenges and possibilities in practical settings.

Sl	Course content	Mapped modules	Hour allotted
CO1	• Definition of Hospital • Overview of Professional service units of a hospital (clinical and non-clinical) • Organization of the hospital • Management structure • Governing body, Hospital committees and hospital functionaries Duties and responsibilities of various levels of management	**M1**	**8**
CO2	Hospital Planning-concept • Guiding principles in planning hospital facilities & services Planning the hospital building. • Stages in planning, Finance, Location, Need assessment survey of community, factors determining site, legal requirements, design consideration, Project management & implementation, Gantt Chart Planning the operational units, engineering, lighting etc.	**M2**	**12**

CO3	Health Planning • National Health Policy,2002(overview) • National Health Policy,2017 • National Population Policy • NITI Aayog	**M3**	**6**
CO4	National Health Programmes: • National Dengue control programme, • National Leprosy Eradication Control Programme, • National Framework for Malaria Elimination (2016-2030) programme, • NACP-IV(2012-2017), • RNTCP, • Universal Immunization Programme including Indradhanush , • RCH Phase II, • Vision 2020, • National Health Mission, • National Mental Health Programme, • National Family Planning Programme	**M3, M4**	**10**
CO5	• Health Manpower Planning and distribution • Health service Research	**M5**	**4**

Learning Outcome/ Skills:

Hospitals are complex organizations with intricate structures. Student will study how different departments and functions within a hospital interact, and how the organizational structure affects decision-making and efficiency.

Module Number	Content	Total Hours	% of questions	Bloom Level (applicable)	Remarks, if any
THEORY					
M1	Introduction to Hospital Planning	**8**	**20**	**1,2**	**NA**
M2	Hospital Planning-concept	**12**	**35**	**1,2,3**	**NA**
M3	Health Planning	**6**	**20**	**1,2**	**NA**
M4	National Health Programmes	**10**	**15**	**1,2,3**	**NA**
M5	• Health Manpower Planning and distribution • Health service Research	**4**	**10**	**1,2,3**	**NA**
Total Theory		**40**	**100**		
Practical		**8**	**-**	**-**	**-**
	TOTAL	**48**	**-**	**-**	

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Course Name: Accounts
BBAHM 102 (MAJOR)

Mode: Offline **Credits: 5(4T+1P)**

Programme Outcome of BBA in Hospital Management (PO)

1. Possessing the necessary skills and knowledge to effectively navigate and apply hospital management principles.
2. Ability to extrapolate to novel situations and Integration of knowledge in diverse contexts.
3. Ability to integrate information from various sources and combine different ideas to create a comprehensive understanding of a topic.
4. After completion, students are capable of collecting, organising, and interpreting data from different sources to gain insights and draw meaningful conclusions.
5. Demonstrate adeptness in accessing, evaluating, and leveraging various information sources using ICT.
6. Able to learn a team-oriented approach.
7. Display the ability to listen attentively, read and write critically, and deliver complicated material to various groups in a clear and coherent manner.
8. Referring to the capacity to exhibit ethical principles and values while overseeing hospital operations and decision-making.
9. Emphasizing the obligation to address societal needs and contribute positively to the community.

Course Outcome (CO)

Aim of the Course: The aim is to achieve knowledge of the fundamentals of managerial accounts and practical application in the hospital operations.

Course Objectives: This course introduces the basic concepts and principles of accounting for preparing the financial statements such as income statement (financial performance) and balance sheet (financial position). The course focuses on detailed understanding of accounting information system, accounting concepts, accounting principles, accounting cycle, recording of transactions, and financial statement concepts.

Students are expected to gain the ability of using accounting information as a tool in applying solutions for managerial problems, evaluating the financial performance, and interpreting the financial structure.

Goals:

CO1: This course enables students to gain preliminary knowledge about accounts.
CO2: This course will enable the students to combine practice and theoretical knowledge of accounting.
CO3: The students of this course will be active learners and develop awareness of emerging trends in accounts
CO4: The course will provide decision making skills to the students in the financial analysis context,
CO5: The students of this course will have the ability to identify and analyse accounts related problems and opportunities in real life situations.

Sl	Course content	Mapped modules	Hour allotted
CO1	• Introduction to Accounting • Accounting: Meaning, Objectives and • Advantages. Users of Accounting Information. • Fundamental Accounting Assumptions: (Going Concern, Consistency, Accrual.) Accounting • Principles: (Accounting Entity, Money Measurement, Accounting	**M1**	**10**

	Period, • Full Disclosure, Materiality, Prudence, Cost Concept, and Dual Aspect, • Revenue recognition, matching.) Recording of • Transactions Double Entry System. Rules of • Debit and Credit • Journal and Ledger. • Preparation of Trial • Balance.		
CO2	• Financial Statements • Financial Statements: Objective and Importance. Trading and Profit and Loss Account: • Balance Sheet: Need, grouping, marshalling of assets and liabilities. Adjustments • in Preparation of Financial Statements: • (With respect to closing stock, outstanding expenses, prepaid expenses, accrued income, • Income received in advance, depreciation, bad debts, provision for doubtful debts.)	**M2**	**10**
CO3	• Cost Accounting: • Introduction: Definition of • Costing, Cost concepts • Types of costs, Classification of costs, Cost sheet	**M2**	**8**
CO4	• Materials control: Introduction: Various stock levels, • Economic Ordering Quantity • Various methods of pricing materials issues (FIFO and LIFO)	**M3**	**8**
CO5	• Analysis of Financial Statements. • Cash Flow Statement. • Glimpses of Computerised Accounting.	**M4**	**4**

Learning Outcome/ Skills:

The objective of this course is to introduce problems of financial accounting such as measuring and reporting issues related to assets and liabilities and preparing the financial statements. Students are expected to gain the ability of using accounting information as a tool in applying solutions for managerial problems, evaluating the financial performance, and interpreting the financial structure.

Module Number	Content	Total Hours	% of questions	Bloom Level (applicable)	Remarks, if any
THEORY					
M1	Introduction to Accounts	**10**	**30**	**1,2**	**NA**
M2	Financial statements and cost accounts	**18**	**35**	**1,2,3**	**NA**

M3	Materials control: Introduction: Various stock levels, Economic Ordering Quantity Various methods of pricing materials issues (FIFO and LIFO)	**8**	**20**	**1,2**	**NA**
M4	Analysis of Financial Statements. Cash Flow Statement. Glimpses of Computerised Accounting.	**4**	**15**	**1,2,3**	**NA**
Total Theory		**40**	**100**		
Practical		**8**	**-**	**-**	**-**
	TOTAL	**48**	**-**	**-**	

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Paper Name: Medical Terminology
BBAHM 201 (MAJOR)

Mode: Offline **Credits: 5(4T+1P)**

Aim of the Course: The aim is to achieve knowledge of the fundamentals of human body system and medical terms used in healthcare.

Course Objectives: The course is aimed to build knowledge about the basics of human body system-physiology and anatomy of human body. The course is prepared to enhance the minds of the students with the objective that they shall grasp and comprehend fundamental medical terminology and can interpret the medical acronyms.

	Graduate Attributes		Hour/ week
CO1	Well-versed in defining the basics of human anatomy and physiology	M1	5
CO2	Identify and define prefixes, roots, and suffices in order to construct proper medical terminology.	M2	5
CO3	Skilled at interpreting the key body systems and functions, understanding the related diseases and surgical procedures	M3	15
CO4	Expert in evaluating and utilizing the correct prescription terms.	M4	5
CO5	Competent in understanding a variety of medical imaging technologies and standard examination positions	M5	10

Module	Paper details
1.	• Basics of Human Body, Body cavities, Body planes and Basic examination • Cell and cell division
2.	• Introduction to medical terminology, Word formation, Greek & Latin prepositional • Commonly used prefixes, suffixes and root words in medical terminology, • Commonly used medical terms to define different parts of the body
3.	• Basic knowledge and Elementary Diseases of Human System • Elementary Diseases of Cardio-Vascular System (IHD, Angina, Heart valve Disease, CHD, Anemia, Thalasemia, Hemophilia), Therapeutic and surgical procedures- Angioplasty, CABG, CPR, Defibrillation, Pacemaker implantation, Heart transplantation. • Elementary Diseases of Digestive system (Peptic Ulcer, GERD, Dyspepsia, Jaundice, Gallstone, Hepatitis) Therapeutic and surgical procedures- Appendectomy, Whipple procedure, Cholecystectomy, Hiatal Hernia Repair, Nephrectomy, Nissen fundoplication) • Elementary Diseases of nervous system (Stroke, Quadriplegia, Bells' Palsy, Parkinsons ,Alzheimers's disease) Therapeutic and surgical procedures- Awake brain surgery, Brain aneurism surgery, Epilepsy surgery, Locomotor training for spinal cord injury, trigeminal neuralgia surgery, Deep brain stimulation

	• Elementary Diseases of Urinary System (Dialysis, Nephritis, BPH & Hydronephrosis) • Elementary Diseases of Endocrine system (Diabetes, Diabetic Foot, Gangrene, Hypo and Hypersecretion diseases) • Elementary Diseases of Reproductive system- Male and female (Infertility, Endometriosis, PCOS, PCOD, Uterine fibroids, Syphilis, Prostatitis, Erectile dysfunction, Epididymitis) Surgical procedure- Hysterectomy, Laparotomy • Elementary Diseases of Respiratory System (Asthma, Pneumonia, Tuberculosis, COPD, Emphysema)
4.	• Basics of Prescription Reading, Common Latin term and abbreviations used in prescription writing
5.	• Fundamentals of Diagnostic procedure- USG, MRI, X-Ray, CT scan, PET scan, Biopsy, FNAC • Cardiology Dept: ECG, Echo, Angiogram, Coronary Angiography, Doppler ultrasonography, 64 Slice CT, Cardiac catheterization, Holter monitor • Gastroenterology Dept: Colonoscopy, ERCP, EGD, Sigmoidscopy, Esophageal manometry, Capsule endoscopy, MRCP • Reproductive Dept: Colposcopy, HSG, Scrotal USG • Pulmonology Dept: Nuclear lung scanning, Pulmonary artery angiography • Orthopaedic Dept: Bone densitometry, Arthroscopy

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Course Name: MEDICAL RECORD SCIENCE I
BBAHM 202 (MAJOR)

Mode: Offline **Credits: 5(4T+1P)**

BBAHM 202

Aim of the Course: The aim is to achieve knowledge of the fundamentals of medical records science 1 and its practical application in the hospital operations.

Course Objectives: Students will understand the importance of accurate and comprehensive medical record documentation to support patient care, quality improvement, and legal purposes.

Students are expected to gain the ability of the collection, analysis, and organization of health data, ensuring accuracy and completeness of medical records. Students will become familiar with various coding systems, such as ICD-10 (International Classification of Diseases, 10th Revision)

Goals:

CO1: This course enables students to gain preliminary knowledge about medical records.

CO2: This course will enable the students to combine practice and theoretical knowledge of coding, indexing, computerization of MR.

CO3: The students of this course will be active learners and develop awareness of retention of medical records and about the various medico legal cases.

CO4: The students will also have a vivid knowledge about the medical audit processes for quality improvement.

Sl	Course content	Mapped modules	Hour allotted
CO1	• Role of MR in health care delivery • Definition • Types of MR • Importance of MR, • Flow chart of function • Assembling & deficiency check • Format types of MR • Characteristics of MR • Ownership of MR • Maintenance of records in the ward • Content of MR	M1	10
CO2	• Coding • Indexing • Filing • Computerization of MR • Microfilming • Hospital statistics • ICD 9, 10 and 11 • Process of arranging medical records	M2	10

CO3	• **Organization & management of MRD,** • **Retention of MR,** • **Preservation of MR,**	**M3**	**10**
CO4	• **Role of MRD personnel** • **Legal aspects of MR (Medico legal cases)** • **Medical Audit**	**M4**	**10**

Learning Outcome/ Skills:

Upon completing the Medical Records Science course, students will gain the following essential skills:

1. Understanding the role and importance of medical records in healthcare delivery.
2. Defining medical records and recognizing their various types.
3. Assembling, checking, and maintaining accurate medical records.
4. Familiarity with different MR formats, characteristics, and ownership.
5. Efficiently coding, indexing, and filing medical records.
6. Embracing computerization and microfilming for data storage.
7. Utilizing medical records for hospital statistics and research.
8. Organizing and managing the Medical Records Department effectively.
9. Complying with legal aspects of medical records and handling medico-legal cases.
10. Understanding medical audit processes for quality improvement.

Module Number	Content	Total Hours	% of questions	Bloom Level (applicable)	Remarks, if any
THEORY					
M1	Introduction to MR	**10**	**30**	**1,2**	**NA**
M2	Different elements of MR	**10**	**35**	**1,2,3**	**NA**
M3	Organization and management of MR	**10**	**20**	**1,2**	**NA**
M4	Auditing and legal aspects of MR	**10**	**15**	**1,2,3**	**NA**
Total Theory		**40**	**100**		
Practical		**8**			
	TOTAL	**48**			

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Model curriculum structure for 4 year UG programs with fixed subjects for AECC & SEC & CVAC

Sem	Ability Enhancement (Offline)	Skill Enhancement (Online /Sessional)	Common Value added Course (SESSIONAL)
I	AECC101-English & Professional Communication (2 credits)	SEC181-Life Skills & Personality Development (2 credits)	VAC181A/B/C/D/E-Yoga/ Health & Wellness/ Sports / Physical Fitness and Wellness/Community Services (2 credits)
II	AECC201-Modern Indian Languages and Literature (2 credits)	SEC281A/B-IT Skills / Monetizing Social Media or Design Thinking (2 credits)	VAC281A/B/C/D-Critical Thinking / NSS/ Mental Health/ Environmental Studies (2 credits)
III	AECC301-The Constitution, Human Rights and Law (2 credits)	SEC381Understanding basics of Cyber Security (2 credits)	
IV	AECC401A/B-Society Culture and Human Behavior / Universal Human Values (UHV) (2 credits)		
V		Internship to be started after exam of 4th sem (sem break) and completed within 5th sem (weekends) (4 credits)	
VI			
VII			
VIII		Research project 12 credits	
	4 sub – 08 credits	**3 sub & Int & Proj - 22 credits**	**2 sub – 4 credits**

Note:

Normally all 5 credit courses will be either theory (3) + practical (2) [100+100 marks] or theory (4) + tutorial (1) [100 marks]
Normally all 4 credit courses will be either theory (3) + tutorial (1) or theory (4) [100 marks]
Normally all 3 credit courses will be theory (3) – Inter disciplinary (5 to 6 baskets) [100 marks]
Normally all 2 credit courses AEC/SEC/CVA would be theory or online/sessional course
4th year subjects could be foundation of Master's program (as masters would be of 1 year after 4 years UG)
7/8th semester Major subjects could include Projects in core, if required
100/200/300/400 level should be maintained as per UGC document
For online course (Skill Enhancement Course) 2 credits=30 hours.

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Programme Outcomes for AEC, SEC, VAC Courses

	Programme Outcomes	AEC-1	AEC-2	AEC-3	AEC-4	SEC-1	SEC-2	SEC-3	SEC-4	SEC-5	VAC-1	VAC-2
1	Values for life and character building	✔	✔	✔	✔	✔			✔		✔	✔
2	Disciplinary knowledge	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
3	Communication skills	✔	✔	✔		✔			✔	✔	✔	✔
4	Critical thinking	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
5	Problem Solving	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
6	Analytical Reasoning	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
7	Research related skills	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
8	Cooperation/ Teamwork	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
9	Scientific Reasoning	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
10	Reflective Thinking	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
11	Information/ Digital Literacy	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
12	Self-directed Learning	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
13	Moral and Ethical Awareness/Reasoning	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
14	Leadership Readiness/Qualities	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
15	Lifelong learning	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
16	Professional Skills	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔

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Detailed Syllabus

Course: English & Professional Communication	
Course Code: AECC101	**Semester: I**
	Maximum Marks: 100
Teaching Scheme	**Examination Scheme**
Lecture: 2	End semester Exam: 70
Tutorial: 0	Attendance: 5
Practical: 0	Continuous Assessment: 25
Credit: 2	Practical/Seasonal internal continuous evaluation: 0
	Practical/Seasonal external examination: 0

Sl. No.	**Course Objective**
1	To lay emphasis on the development of linguistic competence and honing skills in the domain of communication and its allied affairs.

	Course Outcomes	**Mapped module/Unit**
CO 1	To improve communicative competence of the students.	U1
CO 2	To enable the students converse in the real-life situations.	U1, U2
CO 3	To make the effective use of English for practical purposes.	U1, U2, U3
CO 4	To enable the students, acquire phonetic skills.	U1, U3, U4

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Learning Outcome/Skills:

The candidate will be able to have a deep insight into the areas of grammar, communication, reading aspects and practical skills and preparation to face the corporate world and the general life with confidence. There should be a close linkage between the various elements of language and communication for a flawless reflection.

Unit	Total Hours	% of Questions	Bloom's Taxonomy	Remarks, if any
THEORY				
U1	**6**	**30**	**1, 2, 3**	**NA**
U2	**8**	**20**	**1, 2, 3**	**NA**
U3	**7**	**20**	**1, 2**	**NA**
U4	**9**	**30**	**1, 2, 3**	**NA**
	30	**100%**		

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Course Code:	**AECC101**	
Course:	**English & Professional Communication** Credits:2.0	
Contents		
Chapter	**Name of the topic**	**Hours**
Unit-I	Grammar: Tense, Voice, Phrases and Clauses, Narration, Transformation of Sentences, Vocabulary.	**6**
Unit-II	Communication: Definition, importance, purpose, elements, barriers, body language and strategies.	**8**
Unit-III	Reading Skills: Purpose, Articulation, Syllables, Accent and Voice Modulation.	**7**
Unit-IV	Presentation Skills, its structure, speech preparation, public speaking on special occasion. Interview, types, Group Discussion, Mock Sessions for practice.	**9**
	Total	**30**

List of Books

Name of Author	**Title of the Book**	**Name of the Publisher**
Anjana Tiwari	Communication Skills in English | AICTE Prescribed Textbook	Khanna Publishing House
Kulbhushan Kumar	English (with Lab Manual) | AICTE Prescribed Textbook	Khanna Publishing House
K C Verma	The Art of Communication	Kalpaz Publication.
B K Mitra	Personality Development and Soft Skills	Oxford Publication
Wren and Martin	High School Grammar and Composition, Wren and Martin	S Chand Publication

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Course: Life Skills and Personality Development	
Course Code: SEC181	**Semester: I**
	Maximum Marks: 100
Teaching Scheme	**Examination Scheme**
Lecture: 2	End semester Exam:
Tutorial: 0	Attendance:
Practical: 0	Continuous Assessment:
Credit: 2	Seasonal external examination: 100

Sl. No.	**Course Objective**
1	To understand the importance of the fundamental skill practices of life.
2	To analyze the necessity of growth and expansion of personality to cater a complete look to life.
3	To showcase the extreme necessity of the use and application of soft skills in organization.
4	To comprehend the hand in glove relation between the life skill practices and the subtle nuances of personality.

	Course Outcomes	**Mapped module/Unit**
CO 1	To enable the students, understand the essence of career growth and improvement of professional skills.	U1
CO 2	To enable the students, realize the importance of attitude and its relation to the motivational acumen to manage the daily stress issues for a sum total development.	U1, U2
CO 3	To acquire deemed knowledge on the various tentacles of communicative skills and their subsequent application for a complete reflection.	U1, U2, U3
CO 4	To make the students realize the use and necessity of soft skills in the corporate domain and job searching scenario.	U1, U3, U4

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Learning Outcome/Skills:

The candidate is able to have a detailed understanding of the importance of career and the skills which are high required to pave the path for a distinct destination. There is a perfect blend of the various categories required for the growth and expansion of life and career.

Unit	Total Hours	% of Questions	Bloom's Taxonomy	Remarks, if any
THEORY				
U1	**7**	**25**	**1, 2, 3**	**NA**
U2	**8**	**20**	**1, 2, 3**	**NA**
U3	**9**	**25**	**1, 2, 3**	**NA**
U4	**6**	**30**	**1, 2, 3**	**NA**
	30	**100%**		

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Course Code:	**SEC181**	
Course:	**Life Skills and Personality Development** Credits:2.0	
	Contents	
Chapter	**Name of the topic**	**Hours**
Unit-I	Career and Professional Skills: Listening skills, Reading skills, Writing skills, Resume preparation, exploring career opportunities, cognitive skills, presentation skills, social and cultural etiquettes, digital literacy, ethics and security.	**7**
Unit-II	Attitude and Motivation: Attitude: Concept, meaning, types, applicable factors in daily life. Motivation: Concept, meaning, types, causes of de motivation, remedial measures. Stress Management and Development of Capabilities: Stress: meaning, causes, solutions. Development of Capacities: Leadership qualities, time management, decision making, team work, work ethics, good manners and etiquettes.	**8**
Unit-III	Introduction to Soft Skills: Personal Skills, knowing oneself, confidence building, defining strengths and weaknesses, developing positive attitude, thinking positively, perceptions, values in daily life. Inter and Intra personal skills, Group Dynamics, the importance of a good networking system, troubleshooting method and problem solving tools and techniques.	**9**
Unit-IV	The various branches of Communication Skills: Reading texts, Speaking fluently, Writing effectively. E mail writing and etiquettes followed. Corporate and Job hunting Skills: The Behavioral etiquettes, mannerisms, Stress Management, Time Management, importance of proper body language, writing a good CV (with job application), career planning, importance of goal settings in different spheres and conducting of mock GD.	**6**
	Total	**30**

List of Books

Name of Author	**Title of the Book**	**Name of the Publisher**
Meena and V. Ayothi (2013)	A Book on Development of Soft Skills	PR Publisher and Distributor
Patra Avinash	The Spiritual Life and Culture of India	London, OUP.
Shiv Khera	You can win	MacMillan Books, New York, 2003.
B K Mitra	Personality Development and Soft Skills	Oxford Publication.
Alex K	Soft Skills - Know Yourself and Know your World	S Chand and Company Ltd.

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Course: Yoga	
Course Code: VAC181A	**Semester: I**
	Maximum Marks: 100
Teaching Scheme	**Examination Scheme**
Lecture: 0	End semester Exam: 0
Tutorial: 0	Attendance: 0
Practical: 2	Continuous Assessment: 0
Credit: 2	Practical/Seasonal internal continuous evaluation: 0
	Practical/Seasonal external examination: 100

Sl. No.	Course Objective
1	To impart the students with basic concepts of Yoga for health and wellness.
2	To familiarise the students with health-related Yoga for Overall growth & development
3	To create a foundation for the professionals in Yoga.
4	To impart the basic knowledge and skills to teach Yoga activities.

	Course Outcomes	Mapped module/Unit
CO 1	To explain the meaning of Yoga, & its importance.	U1
CO 2	To know the classification of Yoga & its values	U1
CO 3	To know the different yogic practices and their significance. To understand the effects of kriyas, pranayam and asanas on our body.	U2
CO 4	To comprehend the concept of health, healing, and disease by the influence of Yoga	U3
CO 5	To know the way of Stress management through Yoga and Yogic dietary considerations.	U3
CO 6	To know the need of Yoga for healthy living & Effects of Meditation on our body.	U3

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Learning Outcome/Skills:

The candidate is able to understand the tenets of the theory of yoga, the forms and the application in the regular life to keep the health fit and fine. The candidate will be able to gain the expertise on the various postures of yoga in the accepted sense of term.

Unit	Total Hours	Bloom's Taxonomy	Remarks, if any
U1	12	1	NA
U2	12	1, 2, 3	NA
U3	8	1, 2	NA
	30		

Formative Assessment	
Assessment Occasion/ type	**Weightage in Marks**
Practical	25 Marks
Assignments	25 Marks
Theory Exam	25 Marks
PowerPoint Presentation	25 Marks

Course Code:	**VAC181A**	
Course:	**Yoga** Credits:2.0	
Contents		
Chapter	**Name of the topic**	**Hours**
Unit-I	**Introduction to Yoga** Concept & principles, aims and objectives, classifications, Role of Yoga in character building, Therapeutic values of Yoga, Role of Yoga practices in developing concentration, will power and discipline, Difference between Yoga Asana and physical exercises, Importance of Yoga in daily life.	12
Unit-II	**Asanas, Kriya & Pranayam** Positions of Asanas: Guidelines, importance and limitations. Standing, Sitting, Supine, Proline and Balancing Asanas. (Any three asanas from each)	12

	Definitions of kriyas, Types, brief ideas of each kriya and importance. Pranayam: Definition, guidelines for the practice of pranayama, importance, limitations	
Unit-III	**Yoga and Health** Need of Yoga for health, concept of health and healing: yogic perspectives Yogic principles of healthy living and the role of Yoga in stress management and yogic dietary considerations	**8**
	Total	**30**

List of Books

Name of Author	**Title of the Book**	**Name of the Publisher**
Nagendra, H. R. & Nagarathna, R.	Samagra Yoga Chikitse	Bengaluru: Swami Vivekananda Yoga Prakasana
Kumar, Ajith	Yoga Pravesha	Bengaluru: Rashtrothanna Prakashana
D.M Jyoti	Yoga and Physical Activities	lulu.com3101, Hills borough, NC27609, United State

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Course: Health & Wellness	
Course Code: VAC181B	**Semester: I**
	Maximum Marks: 100
Teaching Scheme	**Examination Scheme**
Lecture: 0	End semester Exam: 0
Tutorial: 0	Attendance: 0
Practical: 2	Continuous Assessment: 0
Credit: 2	Practical/Seasonal internal continuous evaluation: 0
	Practical/Seasonal external examination: 100

Sl. No.	**Course Objective**
1	To help understand the importance of a healthy lifestyle
2	To familiarize students about physical and mental health
3	To create awareness of various lifestyle related diseases
4	To provide understanding of stress management

	Course Outcomes	**Mapped module/Unit**
CO 1	Explain the meaning of health & wellness and its importance.	U1
CO 2	Role of essential components in balanced diet for good health	U1
CO 3	Role of healthy food for prevention of various disease	U2
CO 4	Effect of exercise on hypokinetic disease	U2
CO 5	Stress management through Yoga	U3
CO 6	Importance of sleep on mental and physical health	U3

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Learning Outcome/Skills:

The candidate will be able to understand the importance of wellbeing and the path which would help to manage a healthy lifestyle, keeping the negative factors at bay. There is a huge possibility of the practical approach of health style and fitness.

Unit	Total Hours	Bloom's Taxonomy	Remarks, if any
U1	**15**	**1**	**NA**
U2	**10**	**1, 2**	**NA**
U3	**5**	**1, 2**	**NA**
	30		

Formative Assessment	
Assessment Occasion/ type	**Weightage in Marks**
Practical	25 Marks
Assignments	25 Marks
Theory Exam	25 Marks
PowerPoint Presentation	25 Marks

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Course Code:	**VAC181B**	
Course:	**Health & Wellness** Credits:2.0	
	Contents	
Chapter	**Name of the topic**	**Hours**
Unit-I	**Introduction to Health and Wellness** • Define and differentiate health and wellness. • Importance of health and wellness Education. • Local, demographic, societal issues and factors affecting health and wellness. • Diet and nutrition for health & wellness. • Essential components of balanced diet for healthy living with specific reference to the role of carbohydrates, proteins, fats, vitamins & minerals. • Malnutrition, under nutrition and over nutrition. • Processed foods and unhealthy eating habits. • Body systems and common diseases. • Sedentary lifestyle and its risk of disease.	**15**
Unit-II	**Management of Health & Wellness** • Healthy foods for prevention and progression of Cancer, Hypertension, Cardiovascular, and metabolic diseases (Obesity, Diabetes, Polycystic Ovarian Syndrome). • Types of Physical Fitness and its Health benefits. • Modern lifestyle and hypo-kinetic diseases; prevention and management through exercise. • Postural deformities and corrective measures.	**10**
Unit-III	**Anxiety, Stress and Aging** • Meaning of Anxiety, Stress and Aging • Types and Causes of Stress • Stress relief through Exercise and Yoga • Role of sleep-in maintenance of physical and mental health.	**5**
	Total	**30**

List of Books

Name of Author	**Title of the Book**
Steven N. Blair, William L. Haskell	Physical Activity and Health
Emily Attached & Marzia Fernandez	Mental Health Workbook
Nashay Lorick	Mental Health Workbook for Women: Exercises to Transform Negative Thoughts and Improve Well-Being
C. Nyambichu & Jeff Lumiri	Lifestyle Diseases: Lifestyle Disease Management
Angela Clow & Sarah Edmunds	Physical Activity and Mental Health

Maulana Abul Kalam Azad University of Technology, WB
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Course: Sports	
Course Code: VAC181C	**Semester: I**
	Maximum Marks: 100
Teaching Scheme	**Examination Scheme**
Lecture: 0	End semester Exam: 0
Tutorial: 0	Attendance: 0
Practical: 2	Continuous Assessment: 0
Credit: 2	Practical/Seasonal internal continuous evaluation: 0
	Practical/Seasonal external examination: 100

Sl. No.	**Course Objective**
1	To help understand the importance of sports.
2	To familiarise students about sports and mental health
3	To provide understanding of conditioning of exercise
4	To provide understanding of stress management
5	To gain knowledge about event management

	Course Outcomes	**Mapped module/Unit**
CO 1	Explain the meaning of sports & physical education and its importance.	U1
CO 2	Role of sports in daily life	U1
CO 3	Types of exercises and activities for healthy lifestyles	U2
CO 4	Concept of sports event management	U3
CO 5	Concept of Traditional games	U3

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Learning Outcome/Skills:

The candidate will be able to gain a clear conception on the importance of sports, types, managerial techniques and their relevant applications in the practical domain. Through intense practice the candidate will be able to gain an expertise in sports and its adjoining areas.

Unit	Total Hours	Bloom's Taxonomy	Remarks, if any
U1	**8**	**1**	**NA**
U2	**10**	**1, 2, 3**	**NA**
U3	**12**	**1, 2**	**NA**
	30		

Formative Assessment	
Assessment Occasion/ type	**Weightage in Marks**
Practical	25 Marks
Assignments	25 Marks
Theory Exam	25 Marks
PowerPoint Presentation	25 Marks

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Course Code:	**VAC181C**	
Course:	**Sports** Credits:2.0	
	Contents	
Chapter	**Name of the topic**	**Hours**
Unit-I	**Introduction to Sports** Meaning and definition of Sports. Aims, Objectives and Importance of Sports. Modern trends of Sports Brief concept of Education in relation to Sports	**8**
Unit-II	**Physical Education & Sports** General warmup exercises Specific warmup exercises Conditioning Relaxation Techniques Cardiac Exercise Exercises/Activities for stress management Assessment of BMI	**10**
Unit-III	**Sports Event Management** Meaning, Definition and importance of Sports Management Scope of Sports Event Management Principles of Sports Event Management Major and Minor Sports Events Traditional Games Management	**12**
	Total	**30**

List of Books

Name of Author	Title of the Book	Name of the Publisher
Coalter, F.	Sport for Development: What game are we playing?	Routledge.
Singh Hardayal	Science of Sports Training	DVS Publication, New Delhi
Muller, J. P.	Health, Exercise and Fitness	Delhi: Sports

Maulana Abul Kalam Azad University of Technology, WB
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Course Name: Physical Fitness, Wellness and Yoga

Course Code- VAC 181D

Duration: 60 Hrs. (36 contact Hrs + 24 practice Hrs)

Credits: 2

Mode: Sessional

Course Objective: This course is designed to make the students make use of the benefits of physical fitness and Yoga. Students will learn about various methods of training – circuit, and fartlek training. Besides understand obesity and its management, eating disorders, Micro and Macronutrients, their primary functions, to gain basic knowledge of the different nutrients and their role in maintaining health of the community. This course aims to promote the holistic practice of yoga and enhance the understanding of its principles and benefits.

Learning Outcome: At the end of the course the learners will be able to –

1. Define nutrition, components of nutrition and their impact on health.

2. Understand and apply the sports training related to the physical attributes required for performing specific games.

3. Categorize the role of nutrients and caloric requirements, and sketch the basic classification, functions and utilization of nutrients.

4. Evaluate the factors affecting weight management and solutions for obesity with physical fitness.

5. Make use of physical fitness, build knowledge regarding physical fitness and wellness through Yoga.

UNITWISE CONTENT
UNIT 1: Food and Nutrition: Basic concept of nutrition and diet. Basic concept of macro and micro nutrients. Balanced diet. Eating disorders. Eating for Weight control – A Healthy Weight, The Pitfalls of Dieting, Food Intolerance and Food Myths. **(8 hours)**
UNIT 2: Health, Fitness and Diseases: Definition of obesity and its management. Communicable diseases. Back pain: causes, symptoms and prevention. **(7 hours)**
UNIT 3: Development of Fitness: Benefits of physical fitness and exercise. Improvement of physical fitness. Principles of physical fitness. Development of Personality. Waist-hip ratio Target Heart Rate, BMI**.** Importance of Waist-hip ratio. BMI classification in India. **(8 hours)**
UNIT 4: Methods of training: circuit training, and fartlek training. Objectives of training. Benefit of circuit training. Purpose of circuit training. Benefit of fartlek training. Purpose of fartlek training. **(7 hours)**
UNIT 5: Opening Incantation (Yoga): • **Chalana Kriya/Loosening Practice (Technique, Contraindications and Benefits):** o Neck Movement (Griva Shakti Vikasaka I, II, III, IV) o Shoulder Movement o Bhuja Valli Shakti Vikasaka

o PurnaBhuja Shakti Vikasaka

o Trunk Movement (Kati Shakti Vikasaka I, II, III, IV, V)

o Knee Movement (Janu Shakti Vikasaka)

Yogasana (Technique, Contraindications and Benefits):

o Standing Posture-

▪ Tadasana,

▪ Vrikshasana,

▪ ArdhaChakrasana,

▪ Padahastasana,

▪ Trikonasana

(2 hours training + 8 hours' practice – self paced)

UNIT 6: Yogasana (Technique, Contraindications and Benefits):

o Sitting Posture-

▪ Bhadrasana,

▪ Vajrasana,

▪ Ardha-Ushtrasana,

▪ Ushtrasana,

▪ Shashankasana,

▪ Mandukasana,

▪ UttanaMandukasana,

▪ Vakrasana.

o Prone Posture-

▪ Makarasana,

▪ Bhujangasana,

▪ Shalabhasana.

o Supine Posture-

▪ Uttanapadasana,

▪ Ardhahalasana,

▪ Setubandhasana,

▪ Markatasana,

▪ Pawanamuktasana,

• Shavasana.

(2 hours training + 8 hours' practice – self paced)

UNIT 7: Pranayama (Technique, Contraindications and Benefits):

o NadiShuddhi

o Ujjaye (without Kumbhaka)

o Shitali (without Kumbhaka)

o Bhramari (without Kumbhaka)

• Dhyana (Technique and Benefits):

o Body Awareness

o Breath Awareness

• Closing incantation.

(2 hours training + 8 hours' practice – self paced)

References:

● ***Jim Clover - Sports Medicine Essentials_ Core Concepts in Athletic Training & Fitness Instruction, 2nd Edition -Delmar Cengage Learning (2007)***

● ***Perritano J.V. - The truth about physical fitness and nutrition-facts on File (2010)***

● **Robert C France - Introduction to Sports Medicine and Athletic Training (2nd Ed) (2010)**

Other reference materials/resources of AYUSH/ Yoga Certification Board, etc.

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Course : Community Service	
Course Code: **VAC181E**	Semester 1
Maximum Marks	
Teaching Scheme	**Examination Scheme**
Lecture: 0	End Semester Examination : 0
Tutorial : 0	Attendance: 0
Practical : 2	CA : 0
Credit :2	Practical/ Sessional:0
	Practical/ Sessional: 100

Course Objective: This course's objective is to familiarize students with social issues and engage them in community service via institute-organized trips/events, state-level initiatives, and voluntary contributions to activities such as financial assistance, fairs, festivals, outreach to slums, non-profit organizations, and more.
The course aims to achieve the following goals:

Serial No	**Course Objective**
1	CO 1 Enhance students' understanding of social realities and the role of community development in fostering social upliftment and well-being.
2	CO 2 Encourage students' active engagement and participation in community work to make a positive impact on their perception about society.

Sl No.	**Course Outcomes**	**Mapped module/Unit**
1	CO 1	To explain the meaning of U1, U2, U3
2	CO 2	To know the U4

Learning Outcome/Skills:
Organize social skills into categories:

- Improve student learning through obtaining, analyzing and synthesizing data and using it to evaluate the community problem in light of concepts and theories presented in class
- Demonstrate relevance of community experience to course content

Unit	**Total Hours**	**Bloom's Taxonomy**
1	8	1,2
2	8	1,2
3	4	1,2,3
4	10	1,3,4,5

FORMATIVE ASSESSMENT	
ASSESSMENT OCCASION/ TYPE	WEIGHTAGE IN MARKS
PRACTICAL	25 MARKS
ASSIGNMENTS	25 MARKS
THEORY EXAMINATION	25 MARKS
POWER POINT PRESENTATION	25 MARKS

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COURSE CODE:	**VAC181E**	
COURSE:	**COMMUNITY SERVICE**	CREDIT2.00
CONTENTS		
CHAPTER	**NAME OF THE TOPICS**	**HOURS**
UNIT 1	History, meaning, goals, values, functions, roles, and processes of community work. Both professional and voluntary community work will be explored, along with discussions on the attitudes, roles, and skills that characterize an effective community worker	8
UNIT 2	Pressing social issues in India, such as poverty, unemployment, population challenges, and issues affecting women like dowry and domestic violence. Additionally, we will explore broader social problems like terrorism, corruption, caste conflicts, drug abuse, and AIDS.	8
UNIT 3	Varieties of community engagement. Providing assistance to the less fortunate, supporting those in need, and arranging fundraisers.	4
UNIT 4	COMMUNITY HOURS: Engage in community service excursions and events arranged by the institute and at the state level. Contribute as a volunteer in financial assistance endeavors, fairs, festivals, slums, and non-profit organizations. Additionally, provide a report detailing a specific form of community engagement you've under taken.	10

Recommended Book:

1.Banerjee, G.R. Papers on Social Work on Indian Perspective. Bombay: Tata Institute of Social Sciences.

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Semester II Detailed Syllabus

Course: Modern Indian Languages and Literature	
Course Code: AECC201	**Semester: II**
	Maximum Marks: 100
Teaching Scheme	**Examination Scheme**
Lecture: 2	End semester Exam: 70
Tutorial: 0	Attendance: 5
Practical: 0	Continuous Assessment: 25
Credit: 2	Practical/Seasonal internal continuous evaluation: 0
	Practical/Seasonal external examination: 0

Sl. No.	Course Objective
1	To understand the basics of the functional grammar, its usage and relevant application.
2	To understand technique, style, pattern and the logical development of thoughts in writing various different kinds of prose.
3	To understand the text and the key features associated with the literary aspects of MIL.
4	To understand the need and development of the structure of the contemporary communication skills and its relevant application.

	Course Outcomes	Mapped module/Unit
CO 1	Enable the students comprehend and grip the fundamentals of English Grammar and its allied features applicable in the world.	U1, U2
CO 2	Enable the students develop the skills for writing prose and essays of variety to widen their mental horizon.	U2, U3
CO 3	Enable the students take interest in the selected literary pieces and their relevance as well as purpose in the modern world.	U3
CO 4	Enable the students develop the expertise in the matter of communication and its practical application to add an extra dimension to their learning process.	U1, U4

Learning Outcome/Skills:

The candidate will not only have an exposure to the fundamentals of English grammar and writing features but also develop a keen interest in the literary domain linked with the rich communications skills. The use of modern technology in the world of communication will also widen their mental horizon.

Unit	Total Hours	% of Questions	Bloom's Taxonomy	Remarks, if any
THEORY				
U1	**6**	**25**	**1, 2**	**NA**
U2	**7**	**25**	**1, 2**	**NA**
U3	**9**	**25**	**1, 2, 3**	**NA**
U4	**8**	**25**	**1, 2, 3**	**NA**
	30	**100%**		

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Course Code:	**AECC201**	
Course:	**Modern Indian Languages and Literature** Credits:2.0	
	Contents	
Chapter	**Name of the topic**	**Hours**
Unit-I	Functional Grammar and its usage: Formation of tenses, gerund, infinitive, verbal noun, synthesis of sentences, idioms and proverbs.	**6**
Unit-II	Develop the Writings in a New Pattern and Style: Expository, Descriptive, Reflective, Narrative, Biographical and Autobiographical. Letters (Formal type) and Report Scripting (News Paper style) and Features.	**7**
Unit-III	Selected Literary Pieces: Poetry: JACK (E V Lucas), SNAKE (D H LAWRENCE). Prose: KITE (Somerset Maugham), THE HUNGRY STONE (RABINDRANATH TAGORE) Drama: TARA (MAHESH DATTANI)	**9**
Unit-IV	Communication: Debate, Discussion, Public interaction, Safety measures of Communication, Power of Convincing others and Audio-Visual technology used for the contemporary communication system.	**8**
	Total	**30**

List of Books

Name of Author	**Title of the Book**	**Name of the Publisher**
Wren and Martin	High School Grammar and Composition	S Chand Publication
Palgrave	Golden Treasury	Oxford Publication
B K Mitra	Personality Development and Soft Skills	Oxford Publication
H.N. Kashyap	A Pageant of Poems (English, Paper back)	Selina Publishers

Link:https://everyvillagehasitsjack.wordpress.com/tag/e-v-lucas/(For the poem Jack by E V Lucas)

Maulana Abul Kalam Azad University of Technology, WB
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Course: IT Skills	
Course Code: SEC281	**Semester: II**
	Maximum Marks: 100
Teaching Scheme	**Examination Scheme**
Lecture: 2	End semester Exam:
Tutorial: 0	Attendance:
Practical: 0	Continuous Assessment:
Credit: 2	Practical/Seasonal internal continuous evaluation: 0
	Practical/Seasonal external examination: 100

Sl. No.	Course Objective
1	To understand the usage of various IT tools and software applications commonly used in business environments.
2	Understand the role and importance of IT tools in enhancing productivity, efficiency, and communication in business operations.
3	To understand the utilization of IT tools for data management, analysis, and reporting to support decision-making processes.
4	To understand CRM and technologies such as SEO and use it for business advancement.
5	To understand the importance of cyber security and IT governance.

	Course Outcomes	Mapped module/Unit
CO 1	Students should have a good knowledge on range of IT tools and software applications to support and enhance business operations.	U1
CO 2	Students should have a good knowledge to streamline processes, improve productivity, and optimize resource utilization in business settings.	U1, U2
CO 3	Students should have a good knowledge to utilize data management and analysis skills acquired through IT tools to make informed decisions and drive business performance.	U1, U2, U3
CO 4	Students should have a good knowledge of CRM and technologies such as SEO.	U1, U3, U4
CO 5	Students should have a good knowledge of basic of cyber security and IT governance in India.	U5

Learning Outcome/Skills:

The candidate will be able to have an overview of the use of various IT tools and their corresponding business important apart from gaining knowledge on the other relevant areas of marketing, HR, cyber security and IT governance. This put further prepare the candidate for a more rational and practical approach.

Unit	Total Hours	% of Questions	Bloom's Taxonomy	Remarks, if any
THEORY				
U1	**7**	**20**	**1**	**NA**
U2	**5**	**15**	**1, 2**	**NA**
U3	**6**	**15**	**1, 2, 3**	**NA**
U4	**6**	**20**	**1, 2, 3**	**NA**
U5	**6**	**20**	**1, 2**	
	30	**100%**		

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Course Code:	**SEC281**	
Course:	**IT Skills** Credits:2.0	
	Contents	
Chapter	**Name of the topic**	**Hours**
Unit-I	Introduction to IT Tools in Business: Overview of IT tools and their importance in business, Role of IT tools in enhancing productivity and efficiency, Operating systems and software applications used in business, Introduction to internet and its impact on business, Overview of business information systems and databases, Introduction to ERP and its usages, ERP systems (e.g., SAP, Oracle, Microsoft Dynamics).	**7**
Unit-II	Communication and Collaboration Tools: Email communication and management, Instant messaging and online chat tools, Video conferencing and web conferencing tools, Document sharing and version control tools, Virtual team communication and coordination.	**5**
Unit-III	Data Management and Analysis Tools: Introduction to spreadsheets and data analysis, Advanced features of spreadsheet software (e.g., formulas, functions, pivot tables), Database management systems and their role in business, Business intelligence and data analytics tools.	**6**
Unit-IV	Marketing, HR Tools: Customer relationship management (CRM) systems, Marketing automation tools, Email marketing tools, HRIS (Human Resource Information System) concept and tools, Web analytics and search engine optimization (SEO) tools.	**6**
Unit-V	Cybersecurity and IT Governance: Importance of cybersecurity in business, Types of cyber threats and attack vectors, Network security and firewalls, Data encryption and secure communication, Risk assessment and management, IT governance frameworks and compliance standards.	**6**
	Total	**30**

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List of Books

Name of Author	Title of the Book	Name of the Publisher
R.K. Jain	IT Tools and Business Systems	Khanna Publishing House
Debtoru Chatterjee	Cyber Crime And Its Prevention In Easy Steps	Khanna Publishing House
Debtoru Chatterjee	Cyber Attacks and Counter- Measures Made Simple	Khanna Publishing House
Mayank Bhusan Rajkumar Singh Rathore Aatif Jamshed	Fundamentals of Cyber Security (Principle, Theory and Practices)	BPB Publications
Nippani K.S	Digital India Governance Transformation	Nippani K.S
Nigam Manisha	Data Analysis with Excel	BPB
Jagdish N Sheth , Parvatiyar Atul , G Shainesh	Customer Relationship Management: Emerging Concepts, Tools and Applications	McGraw Hill Education
Upendra Rana	Step By Step Guide to SEO	Prabhat Prakashan
Taprial Varinder	Search Engine Optimisation	Pustak Mahal

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Course: Critical Thinking	
Course Code: VAC281A	**Semester: II**
	Maximum Marks: 100
Teaching Scheme	**Examination Scheme**
Lecture: 0	End semester Exam: 0
Tutorial: 0	Attendance: 0
Practical: 2	Continuous Assessment: 0
Credit: 2	Practical/Seasonal internal continuous evaluation: 0
	Practical/Seasonal external examination: 100

Sl. No.	**Course Objective**
1	To understand key concept of critical thinking
2	To Clarify the difference in cognition, reasoning and logics. Improve their decision making based on facts, assumptions, arguments etc.
3	Able to see a problem with a logical approach to find a quick solution.

	Course Outcomes	**Mapped module/Unit**
CO 1	Explain the meaning of critical thinking and its components.	U1
CO 2	To know the importance of critical thinking in every day's life	U1
CO 3	To know the different kinds of arguments, its validity and evaluation	U2
CO 4	To understand the logical fallacies during arguments	U2
CO 5	Influence of biases during decision making	U3
CO 6	To learn the different techniques to analyze problem and find out the solutions	U3

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Learning Outcome/Skills:

The candidate will have an exposure to the intricacies of critical thinking, arguments, logical fallacies and the ability to analyse the complex problems. This would further help the candidate develop a logical and rational bent of mind to face the practical texture with confidence.

Unit	Total Hours	Bloom's Taxonomy	Remarks, if any
U1	8	1, 2	NA
U2	10	1, 2	NA
U3	12	1, 2, 3	NA
	30		

Formative Assessment	
Assessment Occasion/ type	**Weightage in Marks**
Project/Report writing	25 Marks
Assignments	25 Marks
Theory Exam	25 Marks
PowerPoint Presentation	25 Marks

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Course Code:	**VAC281A**	
Course:	**Critical Thinking** Credits:2.0	
	Contents	
Chapter	**Name of the topic**	**Hours**
Unit-I	**Introduction of Critical Thinking** ● Define Critical thinking ● Components of critical thinking ● Recognize clear thinking, critical thinking & clear writing ● Benefits of critical thinking in everyday life	**8**
Unit-II	**Arguments & Logical Fallacies** ● Constitution of an argument ● Describe Types of Inductive arguments ● Evaluating the validity and reliability of an argument ● Contextual evaluation of arguments ● What are logical fallacies ● Recognizing logical fallacies in arguments ● Spotting and refuting logical fallacies	**10**
Unit-III	**Cognitive Biases & Analyzing complex problems** ● What are cognitive biases? ● How cognitive biases can lead to poor decision-making ● Avoiding common cognitive biases ● Breaking down complex problems ● Analyzing complex problems using critical thinking techniques ● Using creative problem-solving skills to arrive at innovative solutions	**12**
	Total	**30**

List of Books

Name of Author	Title of the Book
M. Neil Browne, 2011	Asking the Right Questions: A Guide to Critical Thinking
Rolf Dobelli., 1981	The Art of Thinking Clearly
E Balaguruswamy, 2023	Developing Thinking Skills (The Way to Success) | AICTE Recommended
Anthony Weston 1986	A Rulebook for Arguments
Adam M. Grant, 2021	Think Again: The Power of Knowing What You Don't Know
Tom Chatfield, 2017	Critical Thinking: Your Guide to Effective Argument, Successful Analysis and Independent Study (Kindle Edition)

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Course: NSS	
Course Code: VAC281B	**Semester: II**
	Maximum Marks: 100
Teaching Scheme	**Examination Scheme**
Lecture: 0	End semester Exam: 0
Tutorial: 0	Attendance: 0
Practical: 2	Continuous Assessment: 0
Credit: 2	Practical/Seasonal internal continuous evaluation: 0
	Practical/Seasonal external examination: 100

Sl. No.	**Course Objective**
1	The course help students to understand rich cultural diversity of India and have pride through a better knowledge of the country
2	Students should be able to understand the community in which they work and their relationship
3	Identify the needs and problem of the community and involve them in problem solving
4	Develop capacity to meet emergencies and natural disasters
5	Practice national integration and social harmony

	Course Outcomes	**Mapped module/Unit**
CO 1	Explain the meaning NSS and its importance in society.	**U1**
CO 2	Organizational structure and responsibilities	**U1**
CO 3	Basic activities, method and adaptation done by NSS	**U2**
CO 4	Concept of volunteerism & leadership	**U3**
CO 5	Concept of disaster management	**U3**

Learning Outcome/Skills:

The candidate will have a detailed exposure on the basic ideas, approaches, activities and management of NSS. Moreover, the candidate will be able to understand the role of volunteers and their subsequent needs and importance to manage the crucial hours.

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Unit	Total Hours	Bloom's Taxonomy	Remarks, if any
U1	8	1	NA
U2	10	1, 2, 3	NA
U3	12	1, 2	NA
	30		

Formative Assessment	
Assessment Occasion/ type	**Weightage in Marks**
Practical	25 Marks
Assignments	25 Marks
Theory Exam	25 Marks
PowerPoint Presentation	25 Marks

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Course Code:	**VAC281B**	
Course:	**NSS** Credits:2.0	
	Contents	
Chapter	**Name of the topic**	**Hours**
Unit-I	**Introduction & Basics Concept of NSS** History and Philosophy Aims, Objectives of NSS. Emblem Sign, NSS Badge, Clap, Flag NSS Song: Lakshya Geet, Sadbhavna Geet, Rastriya Yuba Geet Organizational Structure, Role and Responsibilities	**8**
Unit-II	**NSS Programme & Activities** Concept of Regular activities Visit and survey -orphanage, old age home & child care Methodology of conduct survey Basics of adaptation of village/slums Calender of NSS activities & maintenance of NSS work dairy Understanding Youth: Definition, Profile of youth, Challenges & opportunities of youth	**10**
Unit-III	**Volunteerism & Disaster Management** Volunteerism: Needs and importance, Shramdan as a part of volunteerism Meaning and types of Leadership, Qualities of good leadership, Importance and role of youth leadership Introduction of disaster management, Classification of disaster Role of youth in disaster management	**12**
	Total	**30**

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Recommended Books and Links:

Sl. No.	Books and Links:
1	"Ministry of Youth Affairs and Sports".
2	"Contact Us | National Service Scheme".
3	"National Service Scheme | Ministry of Youth Affairs and Sports | GoI".
4	https://nss.gov.in/sites/default/files/Gujarat_0.pdf[bare URL PDF]
5	https://nss.gov.in/sites/default/files/Madhya%20Pradesh.pdf
6	NSS Manual: 2020

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Course: Mental Health	
Course Code:VAC281C	**Semester: II**
	Maximum Marks: 100
Teaching Scheme	**Examination Scheme**
Lecture: 0	End semester Exam: 0
Tutorial: 0	Attendance: 0
Practical: 2	Continuous Assessment: 0
Credit: 2	Practical/Seasonal internal continuous evaluation: 0
	Practical/Seasonal external examination: 100

Sl. No.	**Course Objective**
1	Fundamentals of Mental Health gives students in depth understanding about different mental health problems.
2	It will help them in the diagnosis, assessment and prevention of mental health related issues. Students will learn about different psychological disorders, their diagnostic criteria, causes and treatments. They will also learn about different assessment techniques.
3	It will help them to take care of their mental health and also the mental health of other people in the society.
4	After successful completion of the course student will be able to differentiate among different psychological disorders.

	Course Outcomes	**Mapped module/Unit**
CO 1	To understand and explain the introduction to mental health models, potential identification, wellness and above all the criteria for normal and abnormal behaviour and their subsequent classification and remedial measures.	U1
CO 2	To understand and analyse the concepts of neurotic psychotic disorders, models of psychopathology and overview analysis of the disorders and their diagnostic procedures.	U2
CO 3	To comprehend the impact of different therapies, counselling to cure different disorders and their practical solutions.	U3
CO 4	To learn and assess the different techniques that will help to make a correct judgement of different mental health disorders and the ways of treatment and releaf.	U4

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Learning Outcome/Skills:

The candidate will gain intense drive to gather a substantial knowledge on the health of mind, different models of psychopathology, roles, assessment and an overview to tackle any kind of related situation in a hassle-free manner.

Unit	Total Hours	Bloom's Taxonomy	Remarks, if any
U1	**5**	**1**	**NA**
U2	**8**	**1, 2**	**NA**
U3	**7**	**1, 2, 3**	**NA**
U4	**10**	**1, 2, 3**	**NA**
	30		

Formative Assessment	
Assessment Occasion/ type	**Weightage in Marks**
Practical	25 Marks
Assignments	25 Marks
Theory Exam	25 Marks
PowerPoint Presentation	25 Marks

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Course Code:	**VAC281C**	
Course:	**Mental Health** Credits:2.0	
Contents		
Chapter	**Name of the topic**	**Hours**
Unit-I	Introduction to Mental Health - What is Mental Health • What is Mental Illness • Wellness Cycle • Models of Mental Health • Criteria of Normality and Abnormality	**5**
Unit-II	Introduction to Psychopathology - Models of Psychopathology • Concept of Neurosis and Psychosis • DSM & ICD- Classification of Disorders • Some Major psychological disorder: Anxiety related disorder, Mood Disorder, Personality disorder, Stress related disorder, Schizophrenia, Childhood developmental disorder, Eating disorder, Geriatric disorders.	**8**
Unit-III	Psychotherapy - Introduction to psychotherapy. • Different models of psychotherapy: Psychoanalysis, Behaviour Therapy, Cognitive Behaviour Therapy, Rational Emotive Behaviour Therapy, Client Centred Therapy, Gestalt Therapy, Mindfulness based psychotherapy etc. • Introduction to Counselling • Different counselling techniques	**7**
Unit-IV	Psychological Assessment - Personality assessment • IQ assessment • Assessment of some psychological disorder: Anxiety, Mood, Stress • Case History Taking • Mental Status Examination	**10**
	Total	**30**

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List of Books

Name of Author	Title of the Book	Name of the Publisher
Sadock, B. J, & Sadock V. A Kaplan & Sadock's	Synopsis of Psychiatry: Behavioral Sciences/Clinical Psychiatry	Lippincott Williams and Wilkins and Wolter Kluwer Health, Philadelphia Indian Reprint
Hooley, Butcher, Nock	Abnormal Psychology	Pearson Publication
American Psychiatric Association	Diagnostic & Statistical Manual of Mental Disorders, 5th ed	
	The Icd-10 Classification of Mental & Behavioural Disorders: Clinical Descriptions and Diagnostic Guidelines	
Woolfe, R., Strawbridge, S et all	Handbook of Counselling	
Sharf R. S	Theories of Psychotherapy & Counselling Concepts & Cases	
Palmer, S	Introduction to Counselling & Psychotherapy	
Brems, C (2001)	Basic Skills in Psychotherapy & Counselling	
Rao, S	Counseling and Guidance	McGraw Hill Education.
Morrison, J	The Mental Health Clinician's Workbook: Locking in your professional skills	Guildford Press

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Course: Environmental Studies	
Course Code: VAC281D	**Semester: II**
	Maximum Marks: 100
Teaching Scheme	**Examination Scheme**
Lecture: 0	End semester Exam: 0
Tutorial: 0	Attendance: 0
Practical: 2	Continuous Assessment: 0
Credit: 2	Practical/Seasonal internal continuous evaluation: 0
	Practical/Seasonal external examination: 100

Sl. No.	**Course Objective**
1	The course is designed to provide a working knowledge of environment, ecology and physical sciences for problem solving.
2	The learner will be able to remember, understand and apply the taught concepts and methods involving social and environmental processes for betterment of environmental health and safety.

	Course Outcomes	**Mapped module/Unit**
CO 1	Be able to remember the basic concepts related to environment & ecology	U1, U2
CO 2	Be able to remember & understand the scientific problem related to air, water, noise & land pollution	U3
CO 3	Be able to understand environmental Protection, different renewable energy sources and environmental movements.	U4

Learning Outcome/Skills:

The candidate will be able to acquire a comprehensive knowledge on the fundamental domains of environment, ecosystem, pollution and the ways and means developed to protect the environment for our future generation. This would also create a sense of responsibility and sharp awareness on the role and importance of environment in our life.

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Unit	Total Hours	Bloom's Taxonomy	Remarks, if any
U1	4	1	NA
U2	8	1, 2	NA
U3	10	1, 2, 3	NA
U4	8	1, 2, 3	NA
	30		

Formative Assessment	
Assessment Occasion/ type	**Weightage in Marks**
Field Survey/Project	25 Marks
Assignments	25 Marks
Theory Exam	25 Marks
PowerPoint Presentation	25 Marks

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Course Code:	**VAC281D**	
Course:	**Environmental Studies** Credits:2.0	
	Contents	
Chapter	**Name of the topic**	**Hours**
Unit-I	**Fundamentals of Environment:** Introduction, Multidisciplinary nature, Scope and importance; the need for environmental education. Concept of sustainability and sustainable development	**4**
Unit-II	**Ecosystems** Ecosystems: Definition, Structure: food chains, food webs and function of ecosystem: Energy flow, nutrient cycle and ecological succession. Ecological Interactions, Biodiversity and Conservation – Levels, India as a mega-biodiversity nation, Threats to biodiversity, Ecosystem and biodiversity services.	**8**
Unit-III	**Environmental Pollution** Environmental Pollution - Types: - Air pollution, Water pollution, Land pollution, Noise pollution; pollutants, Effects of pollution, Control and Remedial measures.	**10**
Unit-IV	**Environmental Protection** Environmental Protection- Report of the Club of Rome: Sustainable Development, Different Renewable Energy Sources- Wind Power, Water Power, Bio Fuel/Solid Bio Mass, Geothermal Energy, Nuclear Power, Environmental Movements- Chipko movement; Narmada Bachao movement; Tehri Dam conflict.	**8**
	Total	**30**

List of Books

Name of Author	Title of the Book	Name of the Publisher
M.P. Poonia, S.C. Sharma	Environmental Studies	Khanna Publishing House
M.P. Poonia, S.C. Sharma	Environmental Engineering	Khanna Publishing House
G.N. Pandey	Environmental Management	Vikas Publishing House
Cunningham	Environmental Science	TMH.
R. Rajagopalan	Environmental Studies	Oxford
R. Joshi & MunishKapila	Environment Management	Kalyani Publishers.
C.S. Rao	Environmental Pollution Control Engineering	New Age International Publication.
O.P. Gupta	Elements of Environmental Pollution Control	Khanna Publishing House
O.P. Gupta	Khanna's MultiChoice Questions & Answers in Environmental Engineering	Khanna Publishing House

AE Course: The Constitution, Human Rights and Law

Code- AECC301

Credits: 2

Duration: 30 hours

Course Outcomes:

1 Understand and infer the significance of the constitution of India to students from all walks of life and help them to understand the basic concepts of Indian constitution.

2 Outline the importance of fundamental rights as well as fundamental duties.

3 Relate the functioning of Union, State and Local Governments in the Indian federal system.

4 Explain the procedure and effects of emergency, composition and activities of election commission and amendment procedure.

UNIT-I

Introduction to Constitution:

(6 Hours)

Meaning and importance of the Constitution, salient features of Indian Constitution. Preamble of the Constitution**.** Fundamental rights**-** meaning and limitations. Directive principles of state policy and Fundamental duties -their enforcement and their relevance.

UNIT-II

Union **Government:** **(5 Hours)**

Union Executive- President, Vice-president, Prime Minister, Council of Ministers. Union Legislature-Parliament and Parliamentary proceedings. Union Judiciary-Supreme Court of India – composition and powers and functions.

UNIT-III

State and **Lo**cal **Governments:** **(6 Hours)**

State Executive- Governor, Chief Minister, Council of Ministers. State Legislature-State Legislative Assembly and State Legislative Council. State Judiciary-High court. Local Government-Panchayat raj system with special reference to 73rd and Urban Local Self Govt. with special reference to74th Amendment.

UNIT-IV

Election provisions, Emergency provisions, Amendment of the constitution **(5 Hours.)**

Election Commission of India-composition, powers and functions and electoral process. Types of emergency-grounds, procedure, duration and effects. Amendment of the constitution- meaning, procedure and limitations.

UNIT -5 (8 hours)

HUMAN RIGHTS:

Functioning of different human rights organizations in the country and the National Human Rights Commission in India, Relationship between Human Rights and Fundamental freedom

NHRC and its working, other organizations working for the cause, Relationship between Human Rights and fundamental freedom, addressing rights of women, children, disabled and tribals

Comparing diverse issues of tribals, refugees and prisoners.

Challenges faced by legal academicians, activists and NGOs in effective implementation of Human Rights and laws. Various perspectives and role of Media, Laws safeguarding Human Rights and its implementation

Textbooks

1. M.V.Pylee, “Introduction to the Constitution of India”,4th Edition, Vikas publication,2005.

2. Durga Das Basu(DD Basu) , “Introduction to the constitution of India”,(Student Edition),19th edition,Prentice-Hall EEE, 2008.

Reference Book

1. Merunandan, “Multiple Choice Questions on Constitution of India”, 2 nd Edition,Meraga publication,2007.

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Course: Understanding basics of cyber security	
Course Code: SEC381	**Semester: III**
	Maximum Marks: 100
Teaching Scheme	**Examination Scheme**
Lecture: 2	End semester Exam:0
Tutorial: 0	Attendance: 0
Practical: 0	Continuous Assessment: 0
Credit: 2	Practical/Sessional internal continuous evaluation: 0
	Practical/Sessional external examination: 100

Sl. No.	Course Objective
1	Analyse and evaluate the importance of personal data its privacy and security.
2	Analyse and evaluate the security aspects of social media platforms and ethical aspects associated with use of social media.

3	Analyse and evaluate the cyber security risks.
4	Based on the Risk assessment, plan suitable security controls, audit and compliance.
5	Evaluate and communicate the human role in security systems with an emphasis on ethics, social engineering vulnerabilities and training.
6	Increase awareness about cyber-attack vectors and safety against cyber-frauds.
7	Take measures for self-cyber-protection as well as societal cyber-protection.

	Course Outcomes	**Mapped module/Unit**
CO 1	After completion of this module, students would be able to understand the concept of Cyber security and issues and challenges associated with it.	U1
CO 2	Students, at the end of this module, should be able to understand the cybercrimes, their nature, legal remedies and as to how report the crimes through available platforms and procedures.	U1,U2
CO 3	On completion of this module, students should be able to appreciate various privacy and security concerns on online Social media	U1,U2,U3
CO 4	After the completion of this module, students would be able to understand the basic concepts related to E-Commerce	U1,U3,U4
CO 5	After the completion of this module, They will become familiar with various digital payment modes and related cyber security aspects, RBI guidelines and preventive measures against digital payment frauds.	U5
CO 6	Students, after completion of this module will be able to understand the basic security aspects related to Computer and Mobiles.	U6

Learning Outcome/Skills:

The candidate is able to have a detailed understanding of the importance of cyber world and the ways and means to survive in the cyber world.

Unit	**Total Hours**	**% of Questions**	**Bloom's Taxonomy**	**Remarks, if any**
THEORY				
U1	**6**	**20**	**1, 2, 3**	**NA**
U2	**6**	**20**	**1, 2, 3**	**NA**

U3	**6**	**20**	**1, 2, 3**	**NA**
U4	**3**	**10**	**1, 2**	**NA**
U5	**6**	**20**	**1,2,3**	**NA**
U6	**3**	**10**	**1,2**	**NA**
	30	**100%**		

Course Code:	**SEC381**	
Course:	**Understanding basics of cyber security** Credits:2.0	
Contents		
Chapter	**Name of the topic**	**Hours**
Unit-I	**Introduction to Cyber security** Defining Cyberspace and Overview of Computer and Web-technology,Fundamentals of data communication and networking, Concept of cyber security, Information security goals (Confidentiality, Integrity and availability), Issues and challenges of cyber security	**6**

Unit-II	**Cybercrime and Cyber law** Cyber laws, What offences are covered under these laws (Hacking, Data theft, Identity theft (including Password Theft), Email spoofing, Sending offensive messages, Voyeurism, Cyber terrorism) Punishment for cybercrime in India, Reporting of cybercrimes: Organisations dealing with Cybercrime and Cyber security in India.	**6**
Unit-III	**Social Media Overview and Security** Introduction to Social networks. Types of Social media, Social media platforms, Social media monitoring, Hash tag, Viral content, Social media marketing, Best practices for the use of Social media.	**6**
Unit-IV	**E - C o m m e r c e** Definition of E- Commerce, Main components of E-Commerce, Elements of E-Commerce security, E-Commerce threats, E-Commerce security best practices	**3**
Unit-V	**Digital Payments** Introduction to digital payments, Components of digital payment and stake holders, Modes of digital payments- Banking Cards, Unified Payment Interface (UPI), e-Wallets, Unstructured Supplementary Service Data (USSD), Aadhar enabled payments, Digital payments related common frauds and preventive measures. RBI guidelines on digital payments and customer protection in unauthorized banking transactions. Relevant provisions of Payment Settlement Act 2007.	**6**
Unit-VI	**Digital Devices S e c u r i t y** Password policy, Security patch management, Data backup, Downloading and management of third-party software, Device security policy, Cyber Security best practices	**3**
	Total	**30**

List of Books

Name of Author	**Title of the Book**	**Name of the Publisher**
Debtoru Chatterjee	Cyber Crime and Its Prevention in Easy Steps	Khanna Publishing House
Debtoru Chatterjee	Cyber Attacks and Counter- Measures Made Simple	Khanna Publishing House
Behrouz A. Forouzan	Data communication and Networking	McGraw Hill Education (India) Pvt. Ltd.
Mayank Bhushan	Fundamentals of Cyber Security	BPB Publications

Gupta & Gupta	Information Security & Cyber Laws	Khanna Publishing House
M.M. Oka	E-Commerce	Everest Publishing House.
Jeeva Jose & Vijo Mathew	Introduction to Security of Cyber-Physical Systems	Khanna Publishing House

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Course: Society Culture and Human Behavior	
Course Code: AECC401A	**Semester: IV**
	Maximum Marks: 100
Teaching Scheme	**Examination Scheme**
Lecture: 2	End semester Exam: 70
Tutorial: 0	Attendance: 5
Practical: 0	Continuous Assessment: 25
Credit: 2	Practical/Sessional internal continuous evaluation: 0
	Practical/ Sessional external examination: 0

Sl. No.	**Course Objective**	
1	To explore the relationship between society, culture and human behaviour	
2	To analyse the impact of social norms, values and beliefs on individual and collective behaviour	
3	To examine the cultural diversity and its influence on social interactions and perceptions	
	Course Outcomes	**Mapped module/Unit**
CO 1	Demonstrate and understanding of the interplay between society, culture and human behaviour	U1, U2
CO 2	To know about caste system, unemployment and poverty	U3, U4
CO 3	Critically assess theories and concept related to human behaviour	U5

Learning Outcome/Skills:

The candidate is able to have a detailed understanding of the importance of society, culture and human behavior which are high required to live in a society.

Unit	**Total Hours**	**% of Questions**	**Bloom's Taxonomy**	**Remarks, if any**
THEORY				
U1	**6**	**20**	**1, 2, 3**	**NA**

U2	**6**	**20**	**1, 2, 3**	**NA**
U3	**6**	**20**	**1, 2, 3**	**NA**
U4	**6**	**20**	**1, 2, 3**	**NA**
U5	**6**	**20**	**1, 2, 3**	
	30	**100%**		

Course Code:	**AECC401A**	
Course:	**Society Culture and Human Behavior** Credits:2.0	
Contents		
Chapter	**Name of the topic**	**Hours**
Unit-I	Demographic Profile: Characteristics of Indian Population, Population Growth, Age, Sex, Religion, Language, Occupations, National Policy on Population	**6**
Unit-II	Indian Society and culture: Society and its types, Culture – Features, Characteristics and Diversity. Differences with Western Culture,	**6**
Unit-III	Social Stratification: Caste System, Class System, Communities, Ethnic Groups, Weaker Section and Minorities, Constitutional Provisions for Scheduled Castes, Scheduled Tribes and other Backward Classes.	**6**
Unit-IV	Socio-Economic Problems: Poverty, Illiteracy, Unemployment, Housing, Child Labour, Migration, Occupational Diseases, Insurgency, Terrorism, Crime, Project Affected People, Social Destitute, Beggary, Aged Population, Juvenile Delinquency, Problems in Family Life.	**6**
Unit-V	**Introduction to Human Behaviour:** Overview of human behaviour, Importance of studying human behaviour, determinants of human behaviour	**6**
	Total	**30**

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List of Books

Name of Author	Title of the Book	Name of the Publisher
Andre Beteille	Society and Politics in India	OUP
Dipankar Gupta	Social Stratification	OUP
Ram Ahuja	Social Problems in India	Rawat Publications
M.N. Srinivas	Social Structure and Caste and Other Essays	OUP
A.N. Tripathi	Human Values	New Age International
NCERT	Text Book on Indian Society	NCERT
R. Thapar (ed.)	Tribe, Caste and Religion in India	Macmillian
Subhash Vats	Religion and Dharma	Khanna Publishing House

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AE Course: Universal Human Values

Code: AECC 401B

Credits: 2

Duration: 30 hours

Course Objectives: The course is designed to develop a holistic perspective based on self-exploration about themselves (human being), family, society and nature/existence and to understand (or developing clarity) the harmony in the human being, family, society and nature/existence. It also aims to strengthen self-reflection, commitment and courage to act.

Course Outcomes:

1. Demonstrate self- awaress, and awareness about their surroundings (family, society, nature)
1. Define life responsibilities in handling problems with sustainable solutions, while keeping human relationships and human nature in mind
2. Show critical ability
3. Outline commitments towards human values, human relationship and society
4. Make use of human values in different day-to-day settings in real life

Unit 1 : INTRODUCTION -

NEED, BASIC GUIDELINES FOR VALUE EDUCATION (6 hours)

Purpose and motivation for the course, recapitulation from Universal Human Values-I

Self-Exploration–what is it? - Its content and process; 'Natural Acceptance' and Experiential s

Right understanding, Relationship and Physical Facility- the basic requirements for fulfilment of aspirations of every human being with their correct priority

Understanding Happiness and Prosperity correctly- A critical appraisal of the current scenario

living in harmony at various levels.

Practice sessions to discuss natural acceptance in human being as the innate acceptance for living with responsibility (living in relationship, harmony and co-existence) rather than as arbitrariness in choice based on liking-disliking.

Unit 2 : UNDERSTANDING HARMONY IN THE HUMAN BEING - HARMONY IN MYSELF!
(6 Hours)

Understanding human being as a co-existence of the sentient 'I' and the material 'Body'

Understanding the needs of Self ('I') and 'Body' - happiness and physical facility

Understanding the Body as an instrument of 'I' (I being the doer, seer and enjoyer)

Understanding the characteristics and activities of 'I' and harmony in 'I'

Understanding the harmony of I with the Body: Sanyam and Health; correct appraisal of Physical needs, meaning of Prosperity in detail

Programs to ensure Sanyam and Health.

Practice sessions to discuss the role others have played in making material goods available to oneself. Identifying from one's own life. Differentiate between prosperity and accumulation. Discuss programs for ensuring health vs dealing with disease.

Unit 3 UNDERSTANDING HARMONY IN THE FAMILY AND SOCIETY- HARMONY IN HUMAN-HUMAN RELATIONSHIP (6 Hours)

Understanding values in human-human relationship; meaning of Justice (nine universal values in relationships) and program for its fulfillment to ensure mutual happiness; Trust and Respect as the foundational values of relationship

Understanding the meaning of Trust; Difference between intention and competence

Understanding the meaning of Respect, Difference between respect and differentiation; the other salient values in relationship

Understanding the harmony in the society (society being an extension of family): Resolution, Prosperity, fearlessness (trust) and co-existence as comprehensive Human Goals

Undivided Society, Universal Order- from family to world family.

Practice sessions to reflect on relationships in family, hostel and institute as extended family, real life examples, teacher-student relationship, goal of education etc. Gratitude as a universal value in relationships..

Unit 4 : UNDERSTANDING HARMONY IN THE NATURE AND EXISTENCE - WHOLE EXISTENCE AS COEXISTENCE (6 Hours)

Understanding the harmony in the Nature

Interconnectedness and mutual fulfillment among the four orders of nature- recyclability and self regulation in nature

Understanding Existence as Coexistence of mutually interacting units in all-pervasive space

Holistic perception of harmony at all levels of existence.

Practice sessions to discuss human beings as cause of imbalance in nature (film "Home" can be used), pollution, depletion of resources and role of technology etc.

Unit - 5 : IMPLICATIONS OF THE ABOVE HOLISTIC UNDERSTANDING OF HARMONY ON PROFESSIONAL ETHICS (6 Hours)

Natural acceptance of human values

Definitiveness of Ethical Human Conduct

Basis for Humanistic Education, Humanistic Constitution and Humanistic Universal Order

Mini Assigned Projects

References:

- R.R Gaur, R Sangal, G P Bagaria, A foundation course in Human Values and professional Ethics, Excel books, New Delhi, 2010, ISBN 978-8-174-46781-2
- Premvir Kapoor, Professional Ethics and Human Values, Khanna Publishing House, 2023.
- B L Bajpai, 2004, *Indian Ethos and Modern Management*, New Royal Book Co., Lucknow. Reprinted 2008.
- PL Dhar, RR Gaur, 1990, *Science and Humanism*, Commonwealth Publishers.
- Sussan George, 1976, *How the Other Half Dies,* Penguin Press. Reprinted 1986, 1991
- Ivan Illich, 1974, *Energy & Equity,* The Trinity Press, Worcester, and HarperCollins, USA

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Inter Disciplinary Baskets for 4 year UG programs (2023-24)
(Updated on 18th July, 2024)

Basket No	Inter Disciplinary Basket	Course Code	Course Name
For 1st Semester Basket A or D			
Basket A	Natural and Physical Sciences	GE1B-01	Medical Microbiology
		GE1B-02	Biochemistry & Nutrition
		GE1B-03	Earth Science
		GE1B-04	Fundamentals of space science
		GE1B-05	Basics of Human Genetics
		GE 1B-06	Fundamentals of marine science
		GE 1B-07	Basics of Evolutionary Biology
		GE 1B-08	Introduction to Interdisciplinary Health Science
Basket D	Library, Information, and Media Sciences	GE2B-01	A Hand on Study on Film
		GE2B-02	Digital Photography Basics and Beyond
		GE2B-03	Cinema and Other Arts
		GE2B-04	Understanding Visual Design Aesthetics
		GE2B-05	Study of Performing Arts
		GE2B-06	The Language of Graphic design: Basics and Beyond
For 2nd Semester Basket B or E			
Basket B	Mathematics, Statistics, and Computer Applications	GE3B-01	IT Literacy
		GE3B-02	Basic Mathematics & Statistics
		GE3B-03	Business Research Methods: Tool & Techniques
		GE3B-04	Mathematics for Computing
		GE3B-05	Probability & Statistics
		GE3B-06	Bio Statistics
		GE3B-07	Data Analysis with R
		GE3B-08	Learn Programming Fundamental with C
		GE3B-09	Programming with Python
		GE3B-10	Code in with Java
		GE3B-11	Computer Graphics
		GE3B-12	Computer Basics and Multimedia Software
		GE3B-13	Data Analysis with SPSS
BasketE	Commerce and Management	GE4B-01	Entrepreneurship Theory & Practice
		GE4B-02	Accounting
		GE4B-03	Principles of Management & Organizational Behaviour
		GE4B-04	Basics of Accounting & Finance in Healthcare Management
		GE4B-05	Marco Economics in Business
		GE4B-06	Business Regulatory Framework
		GE4B-07	Decision Support System

		GE4B-08	Entrepreneurship: Launching an Innovative Business
		GE4B-09	Handling Human Resources In Workplace
		GE4B-10	Social Media management, Advertising & Marketing
		GE4B-11	E-Commerce & M-Commerce
		GE4B-12	Digital Transformation & Industry 4.0
For 3rd Semester Basket C or F			
Basket C	Emerging Tech, Innovation & Others	GE5B-01	Study of Textiles
		GE5B-02	Introduction to Hospitality Industry and major Departments
		GE5B-03	Health Education & Communication
		GE5B-04	Hospital Support Services
		GE5B-05	Blockchain Technology
		GE5B-06	Introduction to 3D printing Technology
		GE5B-07	Advances in Medical Technologies
		GE5B-08	Fundamentals of IOT
		GE5B-09	Basics of Prescription reading and Medical transcription
		GE5B-10	Fundamental of Bioinformatics
Basket F	Humanities and Social Sciences	GE6B-01	Indian Constituency
		GE6B-02	Economics
		GE6B-03	Mind and Measurement
		GE6B-04	Sustainability & Fashion
		GE6B-05	Indian History & Culture
		GE6B-06	Values & Ethics
		GE6B-07	Enhancing Linguistic Competence & Developing Literacy Skills
		GE6B-08	Medical Ethics, Law and Etiquette
		GE6B-09	Law and Ethics
		GE6B-10	Surface & Soft Furnishings Design Development Techniques
		GE6B-11	Design and Human Evolution

(GE1B-01): MEDICAL MICROBIOLOGY

Credit Point:3

Total Credit Hours: 45 Hrs.

Course Objectives:

1. The objective of this course is that after 50 hours of lectures and demonstrations in Addition to clinical the student will be able to understand the causes, findings, investigations, management in relation with physiotherapy.
2. To understand various pathological conditions due to bacteria.
3. To understand viruses
4. To understand various pathological conditions due to viruses

Course Outcomes (CO):

Sl.No.	Course Outcome	Mapped Modules
1	The course will enable students to understand the conditions in Microbiology and its application in relation with physiotherapy.	Module I – Unit 1
2	Students will learn various pathological conditions due to bacteria's	Module I – Unit 2
3	After studying this course the students will understand various pathological conditions and their causative organisms.	Module II – Unit 3
4	Students will learn various pathological conditions due to viruses	Module II – Unit 4

Module I

Unit 1: Bacteria **[20L]**

Cell structure, classification of bacteria. Staining reactions— gram staining, spore staining, acid fast staining. Bacterial growth-nutritional requirement, physical factors affecting. Culture media, growth curve. Bactericidal agents- phenol, alcohol, ETC Sterilization-principles, types, methods.

Unit 2: Outline the bacteria causing the following diseases **[5L]**

RTI, Meningitis, Enteric infection, Anaerobic infection, UTI, Leprosy, TB, STD, Wound infection, Hospital acquired infection.

Module II

Unit 3: Virus **[15L]**

Elementary knowledge of viral morphology, viral genome and classification, viral replication.

Unit 4: Outline the virus causing the following diseases **[5L]**

HIV, Hepatitis, Polio, Measles, Rubella, Herpes

Suggested Readings:

1. Essentials of Medical Microbiology, Sastry Apurba S and Bhat Sandhya
2. The Short Textbook of Medical Microbiology, Satish Gupte
3. Jawetz Melnick & Adelbergs Medical Microbiology, Stefan Riedel, Stephen Morse, et al.
4. A Text Book of Microbiology, P.Chakraborty

Module No.	Content	Total Hours	%age of questions	Covered CO	Covered PO	Blooms Level (If applicable)	Remarks (If any)
Module I Unit 1	Bacteria	20	40	1	4		
Module I Unit 2	Outline the bacteria causing the following diseases	5	10	2	4		
Module II Unit 3	Virus	15	40	3	4		
Module II Unit 4	Outline the virus causing the following diseases	5	10	4	4		

(GE1B-02): BIOCHEMISTRY& NUTRITION

Credit Point: 3

Total Credit Hours: 45 Hrs.

Course Objectives:

1. To understand the concept of solutions and how PH buffers work.
2. To understand the aspects of various nutrients and its preventive effects.
3. To understand the cell and it structure.
4. To obtain knowledge on nutrition and its function.
5. To have a detailed study on nucleic acid and enzymes.
6. To gain a vivid idea on Biological oxidation.
7. To understand the process of metabolism of different energy substances.
8. To understand general Mechanism of tissues & metabolism.
9. To differentiate regulation and production of different hormones.

Course Outcomes (CO):

Sl.No.	Course Outcome	Mapped Modules
1	Ability to understand the concept of solutions and how PH buffers work.	Module I – Unit 1
2	Ability to understand the aspects of various nutrients and its preventive effects.	Module I – Unit 2
3	Ability to define cell and its structures	Module I – Unit 3
4	Ability to gain knowledge on nutrition and its function.	Module I – Unit 4
5	Ability to get an idea on nucleic acid and on enzymes	Module II – Unit 5
6	Ability to define biological oxidation.	Module II – Unit 6
7	Ability to understand To understand the process of metabolism of different energy substances.	Module II – Unit 7
8	Ability to define general Mechanism of tissues & metabolism.	Module II – Unit 8
9	Ability to differentiate regulation and production of different hormones.	Module II – Unit 9

Module I

Unit 1: Biophysics **[5L]**

Concepts of PH and buffers, Acid-base equilibrium, osmotic pressure and its physiological applications.

Unit 2: Nutrition & Prevention **[5L]**

Nutritional aspects of carbohydrate, fat and proteins, Balanced diet, metabolism in exercise and injury. Diet for chronically ill and terminally ill patients.

Unit 3: Cell Organelle **[5L]**

Morphology, Structure and functions of cell, cell membrane, Nucleus, Chromatin, mitochondria, endoplasmic reticulum, Ribosome.

Unit 4: Introduction to nutrition **[5L]**

Definition, functions, sources, classification, monosaccharide, Disaccharides, Polysaccharides, Muco-polysaccharides and its importance, Definition, functions, sources, classification, simple lipids, compound lipids, derived lipids, Saturated and unsaturated fatty acids, Essential fatty acids and their importance, Blood lipids and their implications, cholesterol and its importance. Definition, Sources, Functions, Classification, simple protein, congregated proteins and derived proteins properties and reactions of proteins. Classification, Fat-soluble vitamins A, D, E, K Water soluble vitamins-B Complex and Vitamin C. Daily requirement physiological functions and disease of vitamin deficiency.

Unit 5: Nucleic acid & Enzymes **[5L]**

Structure and functions of DNA, RNA, Nucleosides, Nucleotides, biologically important Nucleotides including energy rich compounds. Definition, Classification, mode of action, factors, affection, enzyme action.

Module II

Unit 6: Biological Oxidation **[5L]**

Respiratory chain and process of Biological oxidation.

Unit 7: Metabolism on Energy Substances **[5L]** Metabolism of Carbohydrate, Lipid, Protein, Mineral: Glycolysis, TCA Cycle, Glycogenesis, Glycogenolysis, Gluconeogensis, maintenance of Blood glucose, Inter conversion of different sugars. Metabolism of cholesterol, Ketone bodies, Athero- sclerosis and obesity, Lipo Protein of their metabolism, Transamination, Transmethylation, Dearmination, Fate of Ammonia Urea synthesis and synthesis of creatinine, inborn errors of metabolisms.Iron, Calcium, Phosphorous, Trace elements.

Unit 8: Metabolism & the types of tissues **5L]**

Mucopolysacharides, Connective tissue proteins, Glyco-proteins, Chemistry and metabolism of bone and teeth. Metabolism of skin. Composition, Metabolism, Chemical mediators of nerve activities. Structure, metabolism of muscles, muscle contraction.

Unit 9: Regulation & Production of Hormones **[5L]**

General characteristics and Mechanism of Hormone actions, Insulin, Glucose, Thyroid and Para-Thyroid hormones. Cortical sex hormones.

Module No.	Content	Total Hours	%age of questions	Covered CO	Covered PO	Blooms Level(If applicable)	Remark (If any)
Module I Unit 1	Biophysics	5	9	1	4		
Module I Unit 2	Nutrition & Prevention	5	8	2	4		
Module I Unit 3	Cell Organelle	5	9	3	4		
Module I Unit 4	Introduction to Nutrition	5	17	4	4		
Module I Unit 5	Nucleic acids & Enzymes	5	8	5	4		
Module II Unit 6	Biological Oxidation	5	9	6	4		
Module II Unit 7	Metabolism on Energy Substances	5	16	7	4		
Module II Unit 8	Metabolism and types of tissues	5	16	8	4		
Module II Unit 9	Regulation & Production of Hormones	5	8	9	4		

Suggested Readings:

1. Textbook of Biochemistry, Chatterjee M.N –Jaypee Brothers
2. Textbook of Biochemistry for medical students, Vasudevan D.M – JaypeeBrothers
3. Clinical Biochemistry – Metabolic & Clinical aspects , Marshall & Bangert– Churchill Livingstone
4. Dietetics – B. Srilakshmi , New age International Publisher
5. Nutrition science -- B. Srilakshmi , New age International Publisher

(GE1B-03): EARTH SCIENCE

Mode: Offline **Credits: 3**
Nature: Theory

Course Objectives:

1. To help to understand the formation of earth and its plates.
2. To help to understand the elements of climate and meteorology
3. To help to gather knowledge about hydrology
4. To provide understanding of natural Hazards

Sl	Course Outcome	Mapped modules
CO1	Concepts of formation of earth & tectonic plates	M1
CO2	Brief idea about the elements of climate	M2
CO3	Knowledge about climatology & meteorology	M2
CO4	Concept of Hydrology	M3
CO5	Concept of Natural Hazards	M4

Learning Outcome/ Skills:

- Students will be able to understand the earth, rocks & minerals.
- Students will be able to correlate the climate changes with the influence of different factors
- Students will be able to understand different kinds of hazards and their causes

Module Number	Content	Total Hours	% of questions	Bloom Level (applicable)	Remarks,if any
THEORY					
M1	Earth Processes	10	20	1,2,3	NA
M2	Climatology and meteorology	15	40	1,2,3	NA
M3	Hydrology	15	30	1,2,3	NA
M4	Natural Hazards	5	10	1,2,3	NA
Total Theory			100		
	TOTAL	45			

Module 1: EARTH PROCESSES Origin and Formation of the Earth, Plate Tectonics, Earth Surface Processes , Rocks And Minerals **Total Hours: 10**
Module2: CLIMATOLOGY AND METEOROLOGY Elements of Climate, Weather Phenomenon, Meteorology, Hydrometeorology And Climate **Total Hours: 15**
Module3: HYDROLOGY Introduction to Oceanography, Ocean Currents, Hydrology, Hydrogeology **Total Hours: 15**
Module 4: NATURAL HAZARDS Introduction to Natural Hazards, Geological Hazards, Hydrological Hazards **Total Hours: 05**

References

1. Foundations Of Earth Science 8Th Edition by Frederick K Lutgens and Edward J Tarbuck and Dennis G Tasa,
2. Fundamentals Of Earth Science by Lal And Panna, Anmol Publishers
3. Book of earth Science, Vikram Singh, Rajesh 1st edition
4. Climatology : Atmosphere Weather Climate, K. Siddhartha
5. Elements of Environmental Pollution Control, O.P. Gupta
6. Environmental Studies, M.P. Poonia, S.C. Sharma, Santosh Kumar
7. Environmental Engineering, M.P. Poonia, S.C. Sharma, Santosh Kumar

(GE1B-04): FUNDAMENTALS OF SPACE SCIENCE

Mode: Offline **Credits: 3**
Nature: Theory

Course Objectives:

1. To help understand the solar system and planets
2. To provide knowledge about space physiology
3. To create knowledge about black hole, milky way and other galaxies
4. To create a knowledge about radio telescope

Sl	Course Outcome	Mapped modules
CO1	Explain in detail the solar system and planets.	M1
CO2	Effect of Gravitation and earth rotation	M1
CO3	Cardiovascular, neuromuscular and psychological changes at outer space	M2
CO4	Understand life support system in space	M2
CO5	To impart knowledge about Milky way and black hole	M3
CO6	Understand radio telescope	M3

Learning Outcome/ Skills:

- Students will be able to understand the Solar system, planets, asteroids, comets and meteoroids.
- Students will be able to know the effect of earth rotation and gravitation.
- Students will get a brief knowledge about different moon phases
- Students will be able to understand the physiological as well as psychological changes in space.
- Students will be able to know the milky way, black hole and galaxies.

Module Number	Content	Total Hours	% of questions	Bloom Level (applicable)	Remarks,if any
THEORY					
M1	Solar System Overview	15	30	1,2,3	NA
M2	Space Life	20	40	1,2,3	NA
M3	Galaxies and the Large Scale Structure of the Universe	10	30	1,2,3	NA
Total Theory			100		

TOTAL	**45**			

Detailed Syllabus

Module 1: Solar System Overview

- Explore solar system and, learn about sun, planets, moon, asteroids, comets and meteoroids
- Effects of earth rotation and revolution
- Moon Phases: Waxing, waning and lunar cycle
- How gravity, the sun and the moon influences on tides

Total Hours: 15

Module2: Space Life

- Introduction to space life sciences
- The neuro sensory system in space
- The cardiovascular system in space
- The musculo skeletal system in space
- Psychological issues of space flight
- Life support system

Total Hours: 20

Module3: Galaxies and the Large Scale Structure of the Universe

- The Milky Way
- Other galaxies
- Black holes
- Planetary nebula
- Brief idea about radio telescope

Total Hours: 10

References

1. A Textbook of Astronomy and Astrophysics by Mohit Kumar Sharma and Suresh Chandra,
2. Astronomy, William Waller
3. AN INTRODUCTION TO ASTROPHYSICS, Basu, 2022
4. Space Physiology and Medicine from Evidence to Practice, NICOGOSSIAN A E, SPRINGER
5. The Truth of Origin of Universe, Dr. Sabrie Soloman (5 Volume Set), 2024

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(GE1B-05): BASICS OF HUMAN GENETICS

Mode: Offline **Credits: 3**
Nature: Theory

Course Objectives:

1. To help to understand the Cell and Cell organelles
2. To gain knowledge about DNA structure and DNA replication
3. To help to understand of DNA sequencing
4. To help to understand about cloning

Sl	Course Outcome	Mapped modules
CO1	Knowledge about cell and cells organelles	M1
CO2	Understand Cell Cycle and Apoptosis	M1
CO3	Understand Histo protein, DNA structure and replication	M2
CO4	Knowledge about genome organisation	M2
CO5	Concept of DNA Technology & sequencing	M3
CO6	Concept of Genetic counselling	M4

Learning Outcome/ Skills:

- Students will be able to understand the basics of cell and cell organelles.
- Students will be able to know the DNA structure and DNA replication
- Students will be able to understand DNA technology and sequencing
- Students will able to know about genetic counselling.

Module Number	Content	Total Hours	% of questions	Bloom Level (applicable)	Remarks, if any
THEORY					
M1	Introduction to Cell	10	20	1,2,3	NA
M2	Basics of Genetics	15	40	1,2,3	NA
M3	Concept of molecular biology	15	30	1,2,3	NA
M4	Genetic counselling and management	5	10	1,2,3	NA
Total Theory			100		
	TOTAL	45			

Module 1: Introduction to CELL

From molecules to first cell, from prokaryotes to eukaryotes, from unicellular to multicellular organisms, cell colony, cell cohesion, internal environment or homeostasis of cells, Plasma membrane, Mitochondria, Cytoskeleton. Golgi complex, Endoplasmic reticulum, Ribosomes, Lysosomes and diseases, Peroxisomes, Nucleus and nucleolus.Cell cycle, Apoptosis, cell-cell communication

Total Hours: 10

Module2: Basics of Genetics

Structure of DNA. Histone proteins, Nucleosome, Solenoid structure, Molecular organization of DNA in chromosomes. Heterochromatin and Euchromatin. Human mitochondrial DNA. DNA replication – nuclear and mitochondrial, Transcription, Translation, control of gene expression – Eukaryotic.

Penetrance and expressivity, phenocopy, Gene interactions and modifying genes, Mechanism of sex determination, Sex linked inheritance, Linkage and crossing over.

Concepts of genome organization - split genes, overlapping genes, unique sequences, repetitive sequences, pseudogenes, Transposons, conserved genes. Population Genetics

Total Hours: 15

Module3: Concept of Molecular Biology

Enzymes used in DNA technology, Isolation and purification of DNA (genomic and plasmid) and RNA, Electrophoresis: Agarose, PAGE, Pulse-field electrophoresis, caplillary electrophoresis, 2D electrophoresis.

Polymerase chain reaction and its applications, DNA sequencing, ELISA. Concept of Blotting techniques- Southern, northern and western.

Basics concepts of Clone

Total Hours: 15

Module 4: Genetic Counselling & Management

Overview of genetic counselling, components of genetic counselling, information gathering and construction of pedigrees and their interpretation.

Risk assessment and counselling in common Mendelian and multifactorial syndromes, Management of genetic disorders,

Total Hours: 05

References:

1. Genetics And Its Application, Joshua Peter
2. The Basics of Genetics, Betsey Dexter Dyer
3. FUNDAMENTALS OF GENETICS, Dr. B. D. Singh
4. Principles of Genetics, Pranab Paul
5. Genetic Counselling, Usha Dave

(GE1B-06): MARINE SCIENCE

Mode: Offline **Credits: 3**
Nature: Theory

Course Objectives:

1. To help understand the physical properties of sea waves and tides.
2. To familiarise students about chemical composition of seawater and elements
3. To provide understanding of origin of sea water
4. To provide understanding of plankton and its characteristics
5. To gain knowledge about life cycle of sea weeds

Sl	Course Outcome	Mapped modules
CO1	Explain the Different kinds of tides and waves.	M1
CO2	Explain wave spectrum and wave forecasting	M1
CO3	Composition of seawater and elements of seawater	M2
CO4	Concept of planktons and its classification	M3
CO5	Concept of seaweed lifecycle	M3

Learning Outcome/ Skills:

- Students will be able to understand the tides and waves.
- Students will be able to understand the composition of sea water and their chemical properties
- Students will be able to understand different kinds of biological species and their characteristics

Module Number	Content	Total Hours	% of questions	Bloom Level (applicable)	Remarks,if any
THEORY					
M1	INTRODUCTORY PHYSICAL OCEANOGRAPHY	15	30	1,2	NA
M2	FUNDAMENTALS OF CHEMICAL OCEANOGRAPHY	15	40	1,2,3	NA
M3	BASICS OF BIOLOGICAL OCEANOGRAPHY	15	30	1,2,3	NA
Total Theory			100		
	TOTAL	45			

Module 1: INTRODUCTORY PHYSICAL OCEANOGRAPHY

Physical laws of ocean; chaos complexity & bifurcations, types of tides and tide generating forces; tidal theories- equilibrium & dynamic theories; types of ocean waves; wind generated waves in the oceans and their

characteristics; shallow and deep water waves; wave spectrum and principles of wave forecasting; wave induced near shore current, Longshore current, reap current and sediment movement, storm wave and sediment transport.

Total Hours: 15

Module2: FUNDAMENTALS OF CHEMICAL OCEANOGRAPHY

Constancy of composition for seawater; Chlorinity & the concept of salinity and the methods of their determination; classification of elements present in seawater; major, minor and trace elements their behaviour, distribution and biological interactions.

Physical Properties of seawater; typical distribution of water characteristics in the oceans, major water masses of the world's oceans and their characteristics;

Origin of seawater: composition of rain, river and sea water and the sources of dissolved elements in them. Crustal rock weathering and Sodium balance concept.

Total Hours: 15

Module3: BASICS OF BIOLOGICAL OCEANOGRAPHY

Plankton: Definition, Importance, classification based on size, mode of life and habitat.

Marine Animals: Classification, distribution and characteristics of zooplankton, nekton and benthos. Salient features of foraminifera, radiolarian, peripheral, coelenterates, Polychaeta, mollusks, crustaceans, echinodermsprotochordates and chordates of marine inhabitants.

Seaweeds: Life cycles of morphological and anatomical adaptations, life cycles of common seaweeds and their ecological role. Mangroves: Definition,World distribution of mangroves, osmoregulation mechanism and salt balancing in Mangrove. Morphological, anatomical and physiological adaptations of mangroves

Total Hours: 15

Reference:

1. Oceanography and Marine Biology: An Introduction to Marine Science, David W. Townsend,
2. Oceanography: An Invitation to Marine Science, Tom Garrison
3. Marine Biology 11th Edition by Peter Castro and Michael Huber
4. Introduction to the Biology of Marine Life, Morrissey, John (Author)
5. General Biology, Uma Devi Koduru

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(GE1B-07): BASICS OF EVOLUTIONARY BIOLOGY

Mode: Offline **Credits: 3**
Nature: Theory

Course Objectives:

1. To provide a comprehensive overview of Concept of Evolution.
2. To explain Origin of Life, especially Prokaryotes as well as Eukaryotes in detail.
3. To explore salient features of various theories of evolution
4. To develop comprehensive knowledge regarding various Sources of Variations and their role in evolution

Sl	Course Outcome	Mapped modules
CO1	Concept of Evolution and its importance.	M1
CO2	Origin of life, especially Prokaryotes as well as Eukaryotes.	M1
CO3	Salient features of various Theories of Evolution, Darwinism and NeoDarwinism.	M2
CO4	Hardy-Weinberg Equilibrium	M3
CO5	Evidence of Evolution analogy & homology	M3
CO5	To impart knowledge regarding the origin and evolution of man.	M4
CO6	To know the various sources of variation and their role in evolution.	M4

Learning Outcome/ Skills:

- Students will be able to understand the basic concept of evolution.
- Students will be able to correlate various evolution theories.
- Students will be able to understand the evidence of evolution.
- Students will be able to understand the evolution of human and evolutionary changes.

Module Number	Content	Total Hours	% of questions	Bloom Level (applicable)	Remarks,if any
THEORY					
M1	Life's Beginnings	05	20	1,2	NA
M2	Theories of Evolution	15	30	1,2,3	NA
M3	Evidences of Evolution	15	20	1,2,3	NA
M4	Product of Evolution	10	30	1,2,3	NA
Total Theory			100		
	TOTAL	45			

Detailed Syllabus

Module 1: Life's Beginnings Concept of Evolution , Origin of Life, Origin of Prokaryotes and Eukaryotes. **Total Hours: 05**
Module2: Theories of Evolution Early Ideas of Evolution, Darwin Theory for Natural Selection, Mutation theory for evolution, Modern synthetic theory of evolution. Classic Experiment: Lederberg's Experiment, Hardy-Weinberg Equilibrium **Total Hours: 15**
Module3: Evidences of Evolution Analogy and Homology, Embryological Evidences of Evolution, Evolutionary Paleontological Evidences, Molecular Phylogeny **Total Hours: 15**
Module4: Product of Evolution Micro-evolutionary Changes, Concept of Species & Speciation , overview of Adaptive Radiation, Evolution of Man **Total Hours: 10**

References

1. Mark Ridley. Evolution. 3rd Edition. Blackwell Publishing. (2004).
2. Sabrie Soloman, The Truth of Origin of Universe (5 Volume Set), Khanna Publishing House (2024).
3. Mathur, Tomar, Singh. Evolution and Behaviour. Rastogi Publication, Meerut.
4. Mohan P. Arora. Evolutionary Biology, Himalaya Publishing House, Bombay.
5. P. S. Verma and V. K. Agarwal. Cell Biology, Genetics, Molecular Biology, Evolution and Ecology, Revised Edition. S. Chand Publication (2004).
6. Strickberger. Evolution. Prentic Hall. (2002).
7. Theodore H., Jr Eaton. Evolution. 1st Edition. W. W. Norton Publication. (1970).

Course Name : Introduction to Interdisciplinary Health Science
Course Code: GE IB – 08
Credits: 3 (2L+1 Tutorial)
Teaching Hours: 45

Objective: Interdisciplinary Health Sciences shall encourage students to examine today's complex health issues from a variety of perspectives. This Course provides a holistic view of health for general understanding and appreciation of concepts in and around health and life science.

The students will be able to:
CO1: Understand the basic concept of health.
CO2: Explain the current practices and demographics of health education in India
CO3: Illustrate effective communication strategies in health care sector
CO4: Extend the role of IT in Health Care Sector
CO5: Demonstrate the application of First Aid and CPR

Module 1- Concept of Health: 10 Hrs
Definition of physical health, mental health, social health, spiritual health determinants of health, indicatory of health, concept of disease, natural history of diseases, the disease agents, concept of prevention of diseases, Vaccinations India

Module 2 Evaluation & Practice of Health Education in India. 10 Hrs
Demography and family planning: Demography cycle, fertility, family planning, Contraceptive methods, behavioural methods, natural family planning methods, chemical methods, mechanical methods, hormonal contraceptives, population problem of India.

Module: 3 -Heath Communication: 10 Hrs
Basic Concept & Principles of Communication, Definition, Purpose, Types of Communication, Communication Process, Directions of Communication: Upward, Downward, Lateral, Factors influencing Communication, Barriers of Effective communication

Module 4: Role of IT in Health Sector 10 Hrs
Fundamentals of Management Information System, Introduction to Internet, Decision Support System (DSS), Definition, Relationship with MIS, Evolution of DSS, Characteristics, Classification, Objectives, Applications of DSS, Database Management System (DBMS): Need for using DBMS, Concept of tables, records, attributes

Module 5 : Basic First Aid Techniques 5 Hrs
Aims of first aid. Dealing with an emergency. Resuscitation (basic CPR). Recovery position. Initial Top to Toe Assessment. Hygiene and Hand Washing. First Aid Overview Flow Chart.

Reference Books:

1.Health Communication in the 21st Century, By Kevin B. Wright, Lisa Sparks, H. Dan O'Hair, Blackwell publishing limited, 2013,
2.Health Communication, R.D. Karma Published by Mohit Publications 2008.
3.Counseling Skills for Health Care Professionals, 1st Edition, Rajinikanth AM, Jaypee Brothers, 20
4. Brien, James A O'. : Management Information Systems, McGraw-Hill/lrwin.

5. Indian first aid manual 2016 (7th edition) Authorized manual – English version
https://www.indianredcross.org/publications/FA-manual.pdf

COURSE NAME: **A HAND ON STUDY ON FILM**

Course Code-GE2B-01

Mode: Offline/Blended
Credit: 3

Course Objective: The course is designed for those students who are passionate about Cinema and acting. A lot of young people of our nation are deeply I love with cinema and entertainment, but they often experience a dilemma between choosing their passion and career. This is a course that will fulfil the wish of a student to know the subject 'cinema'. This paper will give the student-

- An idea about how films are made.
- What are tricks of making a review?
- What is the proper way of acting?
- How camera works.

Outcome of this course-

- ✓ The students will be able to write their own blog related to films.
- ✓ They can think about film as a career option.
- ✓ Different corporate house prepare corporate films for their own propaganda. The student who is learning this paper they can lend their hand in making those corporate films.
- ✓ This paper has an extremely creative content in it. So it will be a big help for a student who is teaching a theory based subject this paper will provide a psychological relief and some practical exposure to a learning process.

Sl no.	Course outcome	Mapped module
1	This is made for building an idea about understanding every aspect of the work of Film making	M1,M5,M6
2	Student will gain some knowledge about proper planning and work management that occurs in the process of film making	M2
3	Anyone can make a story , but which story is fit for making a film or how one make his story fit for the screen. There is a detailed learning process for making a good screenplay.	M3
4	For feature films acting is one of the most vital factors. A detailed study about acting is the required for anyone who is interested about feature films.	M4
5	Camera shots and movement are the basic grammar of film making. This paper is	M5, M6

	containing all aspects of camera movements and shots.	
6	Watching films is an inseparable part of the study of Film making.	M6

Detailed syllabus:

Module 1:
How to read a film

i. Module 1: Fiction and non-fiction: Learning meaning by watching a few famous documentary and feature films.
ii. How to make criticism.

Module 2:
Pre production, production and post production: A detailed study of three stages of a film production.

Module 3:
How to make a screenplay

i. Formation of concept.
ii. Writing a film script from a story.
iii. Dialogue writing.

Module 4:
Acting

i. Role playing.
ii. Understanding stage/set.
iii. Exercise through different workshops

Module 5:
Understanding Basic Shots and camera movement.

Module 6:
Watching iconic films from around the globe and maintaining a film diary.

List of Experiments:

1. Watching different genres of film from around the world.
2. Practicing different ways of acting.
3. Understanding the stage of a theatre production.
4. Understanding the set of a film.
5. Study of camera movements and different shots.

Suggestive reading:

1. James Monaco: How to read a film
2. Audio Video Systems, Bali & Bali
3. *Directing: Film Techniques and Aesthetics* by Michael Rabiger's and Mick Hubris-Cherrier
4. Michael Rabiger's *Directing the Documentary*,

Module Number	Context	Total hours	% age of questions	Blooms level (if applicable)	Remarks (if any)
1.	How to read a film	10	10	1,2	
2.	Pre production, production and post production	5	20	1,2,3	
3.	How to make a screenplay	10	20	3,4	
4.	Acting	10	10	2,3,4	
5.	Understanding Basic Shots and camera movement	5	20	1,2,3	
6.	Watching iconic films from around the globe and maintaining a film diary	5	20	1,2,3,4	
		45	100		

5. Directing Actors - Judith Weston
6. Our films their films- Satyajit Ray

Course Name: **Digital Photography Basics and Beyond**

Course Code-GE2B-02

Mode of study: Offline/ Blended
Credits: 3

Course Objectives:

If you love cameras and producing beautiful images, and have an eye for good angles and light, consider a flexible and creative career in Photography. This course is an ever-blooming field with numerous job opportunities as well as business opportunities. Various media agencies and news agencies hire photographers to post on their news channels, newspapers, magazines and websites. Apart from that, there is a constant demand for aesthetic photographers who can click pictures of landscapes, wildlife and other such themes.

Module	Course Outcome	Mapped modules
Module-1	Understanding Introduction to Photography (Analogue to Digital)	M1
Module-	Understanding Photographic Composition	M1,M2

2		
Module-3	Understanding Digital Basics & Digital Platform	M3
Module-4	Understanding Digital Capture	M3,M4
Module-5	Understand Scanning and Image Editing	M4,M5
Module-6	Understanding Digital Retouching & Image Enhancement	M6
Module-7	Understanding Digital Output	M6,M7

Module	Content	Total Hours	%age of questions	Blooms Level (if applicable)	Remarks (If any)
Module-1	Introduction to Photography (Analogue to Digital)	3	10	1,2	
Module-2	Photographic Composition	10	25	2,3	
Module-3	Digital Basics & Digital Platform	5	10	2	
Module-4	Digital Capture	5	10	2,3	
Module-5	Scanning and Image Editing	7	10	2	
Module-6	Digital Retouching & Image Enhancement	10	25	1,2,3	
Module-7	Digital Output	5	10	2,3	
		45	100		

Detailed Syllabus

Module 1	1.0 Introduction to Photography (Analogue to Digital)
	1.1History of photography 1.2 Learning about the digital revolution 1.3 Exposure traingle 1.3 Advantages and disadvantages of digital photography over film photography 1.4 Introduction to camera (Analogue to Digital) 1.5 Elements of photography.
Module 2	**2 Photographic Composition**
	2.1 Principles of Composition 2.2 Rules of Photographic Composition 2.3 Visual perspectives

	2.4 Basics of color
Module 3	**3.0 Digital Basics & Digital Platform**
	3.1 Hardware and System Software - Windows Operating System 3.2 Representation of digital image: Resolution – Pixel Depth – PixelAspect Ratio – Dynamic Colour Range – File Size – Colour Models – Image Compression – File Formats – Calculating image resolution for outputs. 3.3 Digital image method of storing and processing digital image:Raster and Vector method 3.4 Image transportation through floppy, CD, zip and Internet.
Module 4	**4.0 Digital Capture**
	4.1 Digital Image formation – Image Sensors – Different Capturing Method: Digital camera – Scanner – Frame Grabber 4.2 DIGITAL CAMERA: Understanding how digital cameras work – Digital camera types: Floppy Disc type, Flash Card type, Hard Disc type – Overview of current digital cameras.
Module 5	**5.0 Scanning and Image Editing**
	5.1 SCANNING: Scanners as input devices- Workingof a Scanner– Scanning procedure – Scanning resolution. 5.2 IMAGE EDITING: Image editing through image editing softwares like Adobe Photoshop – Adjustment of Brightness, Contrast, Tonal and Colour Values – Experimenting with Level and Curve.
Module 6	**6.0 Digital Retouching & Image Enhancement**
	6.1 Image size – Resolution – Selection tools and techniques – History – Retouching tools – Layers – Photo mounting techniques – Incorporation of text into picture. 6.2 Digital Manipulation: Applying selective effects to images and filters with masks and different digital darkroom effects.
Module 7	**7.0 Digital Output**
	7.1 Placing photos in other documents – Using photos on the web. 7.2 Printers as output devices – Different types of Print, Proofing, Photo quality printing. 7.3 How can a digital image be printed?

Suggested Readings

1. https://photographylife.com/photography-basics
2. Complete Digital Photography by TOM ANG
3. Photography Master class by Phil Ebiner

4. The Ultimate Photography Beginners Guide by Maverick Williams
5. Mastering Photoshop by Khanna Publishing House.

Course Name: Cinema and Other Arts
Course Code: GE2B-03
Credit: 3
Mode: Offline/ Blended

Course Objective: The course is designed to provide a general understanding and appreciation of the history of world cinema, acclaimed international films, artists, and movements. The students will be able to gain a multiple cultural perspective based on the underlying theories and principles of cinema and media.

Sl	Course Outcome	Mapped modules
1	Understand the fundamental components of a Cinema and other arts	M1, M2, M3, M4, M5, M6
2	Remember the readings and understand the perspective	M1, M2
3	Understand the nuances of modern painting	M2, M3
4	Understand the nuances of Indian painting	M2, M3, M4
5	Understand and examine the Indian and Western music	M1, M2, M5
6	Analyze the music of parallel and commercial Indian cinema	M1, M2, M5, M6

Module Number	Content	Total Hours	%age of questions	Blooms Level (if applicable)	Remarks (If any)
Module 1	Pre-Renaissance	8	15	L1, L2	
Module 2	Renaissance and Perspective	8	15	LI, L2	
Module 3	Modern Painting	6	15	L1, L2	Workshop
Module 4	Indian Painting	6	15	L1, L2	Workshop
Module 5	Fundamentals of music	8	15	L2, L3	Workshop
Module 6	Music and cinema	9	25	L2, L3	Workshop
		45	100		

Detailed Syllabus:

M1	**Pre-Renaissance**: Visual representations in cave paintings, in folk cultures and early civilizations like Egypt Visual representations in Greece: A breakaway from earlier practices Visual representations in ancient and medieval India: Ajanta cave paintings,Mughal miniature, Kangra, Ragmalaetc
M2	**Renaissance and Perspective** The Renaissance at a Glancefrom The Enquiring Eye – European Renaissance Art, Development of the idea of perspective; Use of camera obscura and camera lucida Selected Readings from John Berger's Ways of Seeing, Dutch painting; Baroque, Rococo and Mannerism.
M3	**Modern Painting:**Impressionism, Expressionism, Surrealism, Cubism
M4	**Indian Painting** Raja Ravi Verma, Bengal School Contemporary Masters
M5	**Fundamentals of music:** Tone, note, key, octave, musical scales – diatonic and tempered scales, chords, melody, harmony, swar and shruti Folk music, forms and structures of Indian classical music, forms and structures of western classical music; Evolution of musical forms; Music industry and popular music; Urban folk music, Blues, Jazz, Rock
M6	**Music and cinema;** Music for Cinema Comparison of the two art forms – music and cinema; Ray and Ghatak's ideas on structural similarities of music and cinema Analysis of structures of films to compare with musical forms Musical accompaniment of films – from live musical accompaniment of silent era to present day. Diagetic and extra-diagetic music Analysis of music tracks of selected films Electronic Vs acoustic musical accompaniment (Has to be done as a workshop by a music composer) Item numbers of Bollywood films

Suggested Readings:

1. Andrei Tarkovsky, Sculpting in Time
2. Satyajit Ray, Our Films Their Films
3. RitwikGhatak, Rows and Rows of Fences
4. Penguin Dictionary of Music
5. S.C Deva, Music of India

6. E.H Gombirch, The Story of Art, Phaidon Publications

7. Hendrik Willen Van Loon, The Arts of Mankind

8. Hugh Honour and John F. Fleming, The Visual Arts: A History. Prentice Hall, 2005. Sylvan Barnet, A Short Guide to Writing About Art. Prentice Hall, 2007.

9. The Enquiring Eye – European Renaissance Art (National Gallery of Art, Washington)

10. Herbert Read The Meaning of Art 11. Walter Pater The Renaissance

12. John Berger, Ways of Seeing

13. Art Through the Ages by Helen Gardner

14. Nothing If Not Critical: Selected Essays on Art and Artists

15. The Story of Painting by Wendy Beckett

16. Minor: Art Historys History _p2 by Vernon Hyde Minor

17. Isms: Understanding Art by Stephen Little

18. The Visual Arts: A History by Hugh Honour

19. What Are You Looking At: 150 Years of Modern Art in a Nutshell by Will Gompertz

20. Art and Illusion: A Study in the Psychology of Pictorial Representation by E.H. Gombrich

Understanding Visual Design Aesthetics
Course Code-GE2B-04
Credit: 3

Course Objective- To familiarize the student with basic principles and fundamentals in visual art and design. To develop basic skills using tools and theory used in design process. To understand the creative process, develop techniques and methods of creative problem solving.

Sl	Course Outcome (CO)
1	To be able to relate and explain the History of graphic design and understanding of a role of graphic designer
2	To demonstrate graphic design help to think to how to crate movie poster
3	Understand of colour as per the tone of film and choosing appropriate colour
4	Evaluate concepts and apply typography to do film titling and create poster

CO	Blooms Level (if applicable)	Modules	%age of questions
CO1	1,2	M1, M2, M3	30

CO2	1,2	M1, M2	20
CO3	2,3	M2,M3, M4	30
CO4	2,3	M3,M4	20
			100

Detailed Syllabus :

Module 1 (M1) (10L)	Role of a graphic designer, Qualities of graphic designer, Creativity. A great graphic designer must be imaginative and they must be able to apply that imagination into their work • Consistency. ... • Problem solving. ... • Always learning. ... • Able to take criticism. ... • Patience
Module 2 (M2) (15L)	The distinction between art and design Introduction of fundamental elements and principles of visual design and it's application. Geometrical and organic shapes, Texture ,value, tone, negative space etc. • The principles of good design are the tools used by an artist or designer to create an effective composition or design. The principles are: balance, movement, repetition, emphasis, simplicity, contrast, proportion, space, and unity. • The Elements of Design are the language of the visual arts and The 7 elements of design consider space, line, form, light, color, texture and pattern. • Understanding the application and practice of elements of design and principal of design in graphic design.
Module 3 (M3) (10L)	Role of colour in design. Colour theory. Colour psychology. Colour strategy. • Understanding the color cycle and their uses. • What is color circle in art? • What do you mean by Colour circle? • There are three different types of colors: primary, secondary, and tertiary colors • How color creates mood for film
Module 4 (M4) (10L)	**Typography and Logo** The role of typography in design. Type face anatomy classification of typography - serif, san serif, script, decorative. • Definition and practice of San serif and serif font • Difference of San serif and serif font

	• How to chose font
Total	**45**

Suggested Readings:

1. Thinking with Type by Ellen Lupton
2. Logo Modernism by Jens Muller and R. Roger Remington
3. Graphic Design School: A Foundation Course for Graphic ...by David Dabner and Sandra Stewart

Course name: **Study of Performing Arts**

Course Code-GE2B-05

Mode: Offline/Blended
Credits: 3

Practical study of performing arts

This paper is basically a miniature version of one of the most popular subjects of our nation 'Arts and Aesthetics'. People who are interested in dance, music or acting they love to go through such an experience of hand on training about these performing arts. It is a relief from their regular theory classes and gives a scope of building creative instincts that can boost up their usual learning process of any subject. This paper will give the students-

- An idea about the different forms of Indian and western dance and acting.
- Different genres of music of our nation and worldwide.

Outcome of this course-

- ✓ The students will have a hand on experience in learning the art forms they are passionate about.
- ✓ The paper is a study of different art forms that make a human being extremely creative and it makes a person wise and open minded that will be reflected in handling different situations in the personal and professional life of the person who is studying this.

Sl no	Course outcome	Mapped module
1	Building up of a complete idea about various forms of performing arts	M1
2	Generating idea about the history of the practice of the three forms of art in our nation and worldwide.	M2
3	Knowledge about vocal and instrumental music practice and forms in India and worldwide.	M3
4	Gathering knowledge about different forms of dance in India and worldwide.	M4
5	Idea about theatre practice in the nation and in other countries worldwide.	M5
6	Hand on training of all types of performing arts.	M6

Detailed syllabus:

Module number	Context	Total hours	%age of questions	Blooms level (if applicable)	Remarks (if any)
1	Introduction to performing arts.	5	10	1, 2	
2	Idea about the origins of the practice of different medium of performing arts.	10	10	1,2	
3	Intense study of Music	5	20	2,3,4	
4	Intense study of Dance	10	20	2,3,4	
5	Intense study of Theatre	10	20	2,3,4	

6	Practical performance	5	20	5	
		45	100		

Module 1

What is the meaning of performing arts?

Module 2

Idea about the origins of the practice of different medium of performing arts

i. Dance
ii. Music
iii. Theatre

Module 3

Intense study of Music

i. Indian and Western music
ii. Different genre of Indian music
iii. Different genre of Western music

Icons of music: Beethoven, Bach, Mozart, Ravi Shankar, Elvis Presley, The Beatles, John Denver, Michael Jackson, Pink Floyd
Indian: PanditYashraj, Amzad Ali Khan, A.R.Rahman, R.D barman, Sachindev Barman, Begum Akhtar

Module 4

Intense study of Dance

i. Indian and Western forms of dance
ii. Icons in the field of dancing
International :Anna Pavlova, Michael Jackson,FredAstair,MarthaGraham,PatrickSwayze,CarmenAmaya,Willi Ninja,
Indian: Uday Shankar, Rukmini Devi Arundale, PanditBirjuMaharaj, KelucharanMahapatra,GuruVipinSign,Shovna Narayan,SonalMansingh, Balasaraswati,Mrinalini Sarabhai

Module 5

Intense study of Theatre

i. Different types of theatre
ii. Iconic figures in Indian theatre- BadalSarkar, RudraprasadSengupta, UtpalDutta, RatanThiyam, GirishKarnad, Nasiruddin Shah, ShabanaAzmi, KaushikSen, BratyaBasu
iii. Iconic figures in theatre worldwide- Lee Strasberg, Constatine Stanislavski, Laurence Olivier, Bertolt Brecht, Shakespeare, Ibsen.

Module 6

Practical performance

I. One project on Music

II. one project on dance
III. One project of theatre

All of these projects will be based on practical performance of different small groups.

List of Experiments:

1. Intense practice of different genres of music
2. Intense practice of different genres of dance
3. Acting Workshops

Suggestive readings:

1. Indian performing arts-Utpal k Banerjee
2. Universal dance and drama-P. MediniHombal, Luminous books, Varnasi
3. Sangeetnatak academy journal- sangeetnatak academy, New Delhi.
4. Dance theare of India-crossing new aesthetics and culture-Neyogi Books
5. *The Viewpoints Book: A Practical Guide to Viewpoints and Composition* **by Anne Bogart and Tina Landau**
6. *The Empty Space* **by Peter Brook**
7. *History of the Theatre, 10th Edition* **by Oscar G. Brocket and Franklin J. Hildy**
8. *An Actor Prepares* **by Konstantin Stanislavski**
9. *Changed for Good: A Feminist History of the Broadway Musical* **by Stacy Wolf**
10. *The Cambridge Companion to African-American Theatre* **by Harvey Young, ed.**

Course Name: The Language of Graphic design: Basics and Beyond

Course Code-GE2B-06

Mode of study: Offline/ Blended
Credits: 3

Course Objectives:

The scope of Graphic Design has expanded in recent years and advances in communication technology have offered a host of new possibilities to the designer. The course aims to develop analytical skills and critical judgment enabling the student for technological and/or aesthetic innovations in the subject of Communication Design.
Graphic Design begins with the study of design history, theory and traditional design skills, then progresses to current graphic design practices and technology. Graduates are prepared for a wide range of careers in the industry. The program seeks to develop designers with strong aesthetic and analytic skills capable of solving real-world

communication design problems, integrating a command of visual language with imagination, theory and technology.

Module	Course Outcome	Mapped modules
Module-1	Understanding Introduction to Multimedia	M1
Module-2	Understanding Study of Multimedia Computer	M1,M2
Module-3	Understanding Study of Operating System	M2,M3
Module-4	Understanding Basics of Internet	M4
Module-5	Understand Text Component in Multimedia	M5
Module-6	Understanding Image & Graphics component in Multimedia	M6
Module-7	Understanding Animation	M6,M7

Module	Content	Total Hours	%age of questions	Blooms Level (if applicable)	Remarks (If any)
Module-1	Introduction to Multimedia	3	10	1,2	
Module-2	Study of Multimedia Computer	5	25	1,2,3	
Module-3	Study of Operating System	5	10	2	
Module-4	Basics of Internet	7	10	2,3	
Module-5	Text Component in Multimedia	5	10	2,3	
Module-6	Image & Graphics component in Multimedia	10	15	1,2	
Module-7	Animation	10	20	1,2,3	
		45	100		

Module	Topics
Module 1	**1.0 Introduction to Multimedia**

	1.1 What is Multimedia 1.2 Components of Multimedia 1.3 Multimedia product ideas 1.4 Product formats 1.5 Multimedia content 1.6 Multimedia Applications 1.7 Advantages of Multimedia.
Module 2	**2.0 Study of Multimedia Computer**
	2.1 Multimedia Platform & Accessories 2.2 Hardware and system software 2.3 Different configurations of Multimedia Personal Computer.
Module 3	**3.0 Study of Operating System**
	3.1 Introduction to Windows OS: Its different features 3.2 Functions and use 3.3 Management of files and folders.
Module 4	**4.0 Basics of Internet**
	4.1 Internet and its different features 4.2 Hardware and software used for Internet and their purpose 4.3 Concept of E-mail 4.4 Surfing the Website.
Module 5	**5.0 Text Component in Multimedia**
	5.1 Importance of text in Multimedia 5.2 Free Text – Field Text – Considerations for designing Text 5.3 Text Formats – Test Font and Point Sizes 5.4 Character Formats – Scrolling Text 5.5 Special Effects for Text 5.6 Text File Formats 5.7 Hypertext 5.8 Importing & exporting of documents.
Module 6	**6.0 Image & Graphics component in Multimedia**

	6.1 Introduction to Image & Graphics – Understanding kinds of Graphics – Making still images in multimedia application 6.2 DIGITAL IMAGE: Methods of storing & processing (Raster method, Vector method) – Factors influencing quality (Resolution, Pixel depth, Pixel aspect ratio) – Colour models. 6.3 METHODS OF CAPTURING: Scanner – Digital Camera – Frame Grabber. 6.4 IMAGE COMPRESSION: Lossy & Non-lossy – Image file formats. 6.5 CONCEPT OF DIGITAL DARKROOM: Working with image editing software like Adobe Photoshop – Acquiring, Importing & Exporting of images – Reduction & Enlargement of Images.
Module 7	**7.0 Animation**
	7.1 Animation & special effects 7.2 Animation Techniques: Traditional and Computer based animation 7.3 Image manipulation techniques: Tweening, Warping, Morphing 7.4 Two Dimensional Animation and concept of 2D animation softwares like Macromedia Flash etc. 7.5 Three Dimension Animation and concept of 3D Animation softwares like 3D Studio Max etc.

List of Experiments:

1. Windows: Functions & Use.
2. File Handling.
3. Understanding different features of Internet.
4. Experimentation of different typographic features.
5. Experiment with Visual balance, Colors.
6. Experiment within various Animation Techniques.
7. Understanding 2D and 3D Animation.
8. Understanding user interface of different Multimedia Software.

Suggested Readings

1. Multimedia & Animation by V.K. Jain, Khanna Publishing House.
2. Graphic Design: The New Basics: Second Edition by Ellen Lupton
3. Universal Principles of Design, Revised and Updated: 125 Ways to Enhance Usability, Influence Perception, Increase Appeal, Make Better Design Decisions, and Teach through Design by William Lidwell.
4. The Animator's Survival Kit by Richard E. Williams

Course Name: IT Literacy

Course Code: GE3B-01

Mode-Blended

Course Objective: This course is designed impart a foundational level appreciation for the implementation of IT in business and management. Students will be utilizing digital tools for communication, researching and interpreting digital information, developing advanced spreadsheets, understanding operating systems and word processing functions, supporting the evaluation, selection and application of office productivity software appropriate to a sports management context.

Sl	Course Outcome	Mapped modules
1	Identify the principal components of a relevant computer system and describe computer technology for communication in management.	M1, M3
2	Interpret fundamental hardware components that make up a computer's hardware and the role of each of these components relevant to Management.	M1,M2
3	Relate the usage of Digital innovations in Sports Threats and Opportunities of Digital Application in Sports, SWOT analysis.	M2, M4
4	Explain the role of information technology in presentation supporting the functions of large sport events and their stakeholders, as well as the needs of sports federations.	M1, M2, M3
5	To understand the emerging technological trends, as well as solutions and applications that will impact broadcasting and media industries and spectators' experience.	M1, M4, M5, M6
6	Demonstrate developing technology solutions and understanding the limits of data capture (what, how, and why) in sport.	M4, M6

Module	Content	Total Hours	%age of questions	Blooms Level	Remarks (If any)
M 1	Data and Information Storage	10	20	1,2	
M2	Digital Transformation and innovation in Sports Management	06	15	1, 2	
M3	Presentation Software	10	15	1, 2	
M4	Management Information System	06	15	1, 2	
M5	DOS System commands and editors	06	15	2,3	
M6	Programs involving the use of arrays with subscripts and pointers	07	20	2, 3	
		45	100		

Detailed Syllabus:

Module 1 – Data and Information Storage – Data and Information, definition and meaning, Data Storage device: Primary storage – RAM, ROM, EEROM, PROM, EPROM; Secondary storage – direct access devices, serial access devices: hard disks, CD-ROM, DVD Central Processing Unit – Control Unit. Computer languages, machine language, assembly language and high level language, role of assembler and compiler. Storage devices, floppy disc, hard disc, CD ROM and DVD. Importance of Computer as data storage for Businessand Management. **Fundamental Hardware Applications in Sports Management** – RFID Chips, Sensors, Timing System, andtheir applications in Sports Management.

Operating System and Application Software– Meaning of software; broad classification of software; system. Software and application software; utilities. Systems software – Operating systems: Brief introduction to different types of operating systems like DOS, Windows, Unix, Linux etc.,Importance and application of Cloud, Mobile, Artificial Intelligence in Sports Management. Use. **[Total Hours – 10]**
Module 2 - Digital Transformations and Innovations– Digital Transformation and future changes, challenges in Management, factors of success, Impact of Digital media on business, new digitized innovations in modern Management. Impact of Digital media, SWOT analysis.**Role of Data Bases -** Roles, Types, Functions, Current Practice and Future Potentials, Importance of digital technology in Management. **[Total Hours – 06]**
Module 3 - Presentation Software - Power Point – Creating new presentations – Auto content wizard – Using template – Blank presentation – Opening existing presentations – Adding, editing, deleting, copying , hiding slides – Presentations – Applying new design – Adding graphics – Using headers and footers – Animations text – Special effects to create transition slides – Controlling the transition speed – Adding sounds to slides – Using action buttons. **Word processing software:** WORD – Creating a new document with templates & Wizard – Creating own document – Opening/modifying a saved document – converting files to and from other document formats – Using keyboard short-cuts & mouse – Adding symbols & pictures to documents – header and footers – Finding and replacing text – spell check and Grammar check – Formatting text - paragraph formats - adjusting margins, line space – character space – Changing font type, size – Bullets and numbering – Tables – Adding, editing, deleting tables – Working within tables – Adding, deleting, modifying rows and columns – merging & splitting cells. **Spreadsheet software -** EXCEL – Working with worksheets – cells – Entering, editing, moving, copying, cutting, pasting, transforming data – Inserting and deleting of cells, rows & columns – Working with multiple worksheets – switching between worksheets – moving, copying, inserting & deleting worksheets – Using formulas for quick Calculations – Working & entering a Formula – Formatting a worksheet – Creating and editing charts – elements of an Excel Chart – Selecting data to a chart – Types of chart – chart wizard – Formatting chart elements – Editing a chart – Printing charts. **[Total Hours - 10]**
Module 4 - Management Information Management (MIS) - database management, data communications, transaction processing information systems, decision support systems, information reporting systems, office automation, networks, expert systems, and systems analyses and design. **ERP**: Introduction – Need for ERP – Advantages – Major ERP Packages – Applications. **[Total Hours - 06]**
Module 5 - DOS System commands and Editors (Preliminaries) used in Sports Management. **UNIX system** commands and vi (Preliminaries) – Applications in Management. **Programs to demonstrate control structure:** text processing, use of break and continue, etc. **Programs involving functions and recursion,** Use and application in Business and Management. **[Total Hours - 06]**
Module 6 - Programs involving the use of arrays with subscripts and pointers, Programs using structures and files. Applications of C Language. **Microsoft office -** Word, Excel, PowerPoint, Mail merge, Internet – Use and Applications. **[Total Hours –07]**

Suggested Readings:

1.Mano – Computer System Architecture; Pearson Education
2.Tanenbaum – Structured Computer Organization, Pearson Education
3.Martin & Powell – Information Systems: A Management Perspective; mcgraw-Hill
4.Laudon & Laudon – Management Information Systems: Pearson Education

5.Comer: Computer Networks and the Internet: Pearson Education Graham Curtis – Business Information Systems: Addison Wesley
6Introduction to Computers with MS-Office, Leon, TMH
7.An Introduction to Database Systems - C.J. Date, Pearson Education
8Windows 98 6 in one by Jane Calabria and Dorothy Burke – PHI
9.Using Microsoft Office 2000 by Ed, Bott – PHI
10.Enterprise Resource planning (ERP): Text and case studies by Murthy, C S V, HPH
11.Teach yourself SAP in 24 hours by George Anderson; Danielle Larocca - Pearson Education
12.Teach yourself SAP in 24 hours by George Anderson; Danielle Larocca - Pearson Education
13.Running MS – DOS by Van Wolverton, 20th Anniversary Edition
14.C Programming Language (Prentece Hall Software) by Brian W. Kernighan
15.Let Us C by Yashavant Kanetkar.
16.Data Structure Through C by Yashavant Kanetkar
17.C in depth by Deepali Srivastava and S.K.Srivastava
18. Expert Data Structures with C by R.B. Patel.
19. Practical C: Programming for Problem Solving, Venkatesh, Nagaraju Y.
20. Computers Today, Khanna Publishing House.

Paper Code: GE3B-02

Basic Mathematics and Statistics
Total Credit: 3
Total hours of lectures: 60 hours

Course Objective: The course is designed to provide a basic applied knowledge of mathematics. The students will be to apply the number system & basic algebra, set theory, determinants and matrices, limits, continuity, differentiation & Integration, data frequency & distribution and measures of central tendency and measures of dispersion for solving business problems.

statistical problems

Sl	Course Outcome	Mapped modules
1	Remembering	M1,M2,M3,M4,M5,M6
2	Understanding the course	M1,M2,M3,M4,M5,M6
3	Applying the general problem	M1,M2,M3,M4,M5,M6
4	Analyse the problems	
5	Evaluate the problems after analysing	
6	Create using the evaluation process	

Sl.	Topic/Module	Hour
1.	**Module 1 : *The Number System*** – Positive and Negative Integers, Fractions, Rational and Irrational Numbers, Real Numbers, Problems Involving the Concept of Real Numbers. ***Basic Algebra*** – Algebraic Identities, Simple Factorizations; Equations: Linear and Quadratic (in Single Variable and Simultaneous Equations). Surds and Indices; Logarithms and Their Properties (Including Change of Base); Problems Based on Logarithms.	6
2.	**Module 2 : *Set Theory*-**Introduction; Representation of sets; Subsets and supersets; Universal and Null sets; Basic operations on sets; Laws of set algebra; Cardinal number of a set; Venn Diagrams; Application of set theory to the solution of problems ***Permutations and Combinations*** – Fundamental principle of counting; Factorial notation. Permutation: Permutation of n different things; of things not all different; restricted permutations; circular permutations. Combination: different formulas on combination; complementary combination; restricted combination; Division into groups. Mixed problems on permutation and combination	7
3.	**Module 3**: ***Determinants***- Determinants of order 2 and 3; minors and cofactors; expansion of determinants; properties of determinants; Cramer's rule for solving simultaneous equations in two or three variables ***Matrices***- Different types of matrices; Matrix Algebra – addition, subtraction and multiplication of matrices; Singular and non-singular matrices; adjoint and inverse of a matrix; elementary row / column operations; Solution of a system of linear equations using matrix algebra. Concept of Eigen Value, Eigenvector.	6
4	**Module 4:** Differentiation: Meaning & geometrical interpretation of differentiation; standard	4

	derivatives (excluding trigonometric functions); rules for calculating derivatives; logarithmic differentiation. Integration: Meaning, Standard formulas, Substitution, Integration by parts (Excluding Trigonometric functions)	
5.	**Module 5**: ***Data-***Collection, Editing and Presentation of Data: Primary data and secondary data; Methods of collection; Scrutiny of data. Presentation of data: textual and tabular presentations; Construction of a table and the different components of a table. Diagrammatic representation of data: Line diagrams, Bar diagrams, Pie charts and divided-bar diagrams.	5
6.	**Module 5** : ***Frequency Distributions-*** Attribute and variable; Frequency distribution of an attribute; Discrete and continuous variables; Frequency distributions of discrete and continuous variables; Bivariate and Multivariate Frequency Distributions. Diagrammatic representation of a frequency distribution: case of an attribute; case of a discrete variable: column diagram, frequency polygon and step diagram; case of a continuous variable: histogram and ogive.	5
7.	**Module 6** : ***Measures of Central Tendency-*** Definition and utility; Characteristics of a good average; Different measures of average; Arithmetic Mean; Median; Other positional measures – quartiles, deciles, percentiles; Mode; Relation between Mean, Median and Mode; Geometric and Harmonic Mean. Choice of a suitable measure of central tendency.	5
8.	**Module 7: *Measures of Dispersion-*** Meaning and objective of dispersion; Characteristics of a good measure of dispersion; Different measures of dispersion – Range, Quartile deviation, Mean deviation, Mean Absolute deviation, Standard deviation; Comparison of the different measures of dispersion. Measures of relative dispersion – Coefficient of Variation. Combined mean and standard deviation, Combined mean and standard deviation. Introduction to Skewness, Kurtosis, Moments.	7

Suggested Readings

1. H. S. Hall & S. R. Knight – Higher Algebra; Radha Publishing House.
2. Reena Garg, Engineering Mathematics, Khanna Publishing House.
3. Reena Garg, Advanced Engineering Mathematics, Khanna Publishing House.
4. Sancheti& Kapoor – Business Mathematics; Sultan Chand & Company.
5. R. S. Soni – Business Mathematics – Pitambar Publishing House.
6. N G Das, Statistical Methods (Combined edition volume 1 & 2), McGraw Hill Education.
7. J K Sharma: Business Statistics, fifth edition, Vikas Publishing house.
8. The Practice of Business Statistics, Manish Sharma, Amit Gupta, Khanna Publishing House.

(GE3B-03) : BUSINESS RESEARCH METHODS: TOOLS & TECHNIQUES

Credit Points– 3

Course Objectives

1. To understand the **basic concept, meaning and types of research** and its applications in various domains of business.
2. To formulate **research problems and hypotheses**, know about different types of hypotheses and write a research proposal. Should be able to identify the overall process of designing a research study from its inception to its report.
3. To understand **research design** as the blue print of the research process, in depth understanding of different types of research design with their implications.
4. To understand the concept and types of data used in research, and also to know about different types of data collection processes.
5. To familiarize students with different types of **scaling techniques**. Students should be able to distinguish between categorical and continuous measures.
6. To understand **questionnaire designing** and its type. Should be able to understand types of questions to be included in a questionnaire. Learn various advantages and disadvantages of the instrument.
7. To gain the concept of **population, sampling, sampling frame, sampling design** etc. Determination of sample size, understanding of sampling and non sampling error.
8. To formulate **research hypotheses**, to understand different ways to conduct a statistical test of a hypothesis, criteria to select an appropriate statistical test to answer a research question or hypothesis.
9. Able to understand the way of writing a **research report**, its type, structures and the guidelines for visual representation.
10. To gain knowledge with **ethical issues** in research, including those issues that arise in using quantitative and qualitative research

Course Outcomes (CO)

SN.	Outcome	Mapped Modules
1.	Apply Research & Development to solve managerial problems.	Module I/Unit 1

2.	Identify research problems and formulate hypotheses for effective outcome. Write an appropriate research proposal to conduct the research.	Module I/Unit 2
3.	Formulate research design by understanding different types of design and its implementation in different problem situation.	Module I/Unit 3
4.	Select appropriate type of data and design relevant data collection process.	Module I/Unit 4
5.	Use suitable scaling techniques for attitude measurement. Classify numerical and categorical variables for data analysis.	Module I/Unit 5
6.	Design fitting questionnaire for data collection purpose.	Module II/ Unit 6
7.	Select appropriate sample units, sample size and types of sampling method. Design proper sampling design.	Module II/ Unit 7
8.	Formulate and test hypotheses using appropriate statistical technique.	Module II / Unit 8
9.	Write a research report maintaining all its structure to present the research output.	Module II / Unit 9
10.	Conduct research ethically maintaining all the integrity for an unbiased outcome.	Module II / Unit 10

MODULE I

Unit 1 - Introduction to Research: Meaning of research; Types of research- Exploratory research, Conclusive research; The process of research; Research applications in social and business sciences; Features of a Good research study. **(4L)**

Unit 2 - Research Problem and Formulation of Research Hypotheses: Defining the Research problem; Management Decision Problem vs Management Research Problem; Problem identification process; Components of the research problem; Formulating the research hypothesis- Types of Research hypothesis; Writing a research proposal- Contents of a research proposal and types of research proposals. **(6L)**

Unit 3 - Research Design: Meaning of Research Designs; Nature and Classification of Research Designs; Exploratory Research Designs: Secondary Resource analysis, Case study Method, Expert opinion survey, Focus group discussions; Descriptive Research Designs: Cross-sectional studies and Longitudinal studies; Experimental Designs, Errors affecting Research Design. **(8L)**

Unit 4 - Primary and Secondary Data: Classification of Data; Secondary Data: Uses, Advantages, Disadvantages, Types and sources; Primary Data Collection: Observation method, Focus Group Discussion, Personal Interview method. **(4L)**

Unit 5 - Attitude Measurement and Scaling: Types of Measurement Scales; Attitude; Classification of Scales: Single item vs Multiple Item scale, Comparative vs Non-Comparative scales, Measurement Error, Criteria for Good Measurement. **(4L)**

MODULE II

Unit 6 - Questionnaire Design: Questionnaire method; Types of Questionnaires; Process of Questionnaire Designing; Advantages and Disadvantages of Questionnaire Method. **(6L)**

Unit 7 - Sampling: Sampling concepts- Sample vs Census, Sampling vs Non Sampling error; Sampling Design- Probability and Non Probability Sampling design; Determination of Sample size- Sample size for estimating population mean, Determination of sample size for estimating the population proportion. **(5L)**

Unit 8 - Testing of Hypotheses: Concepts in Testing of Hypothesis – Steps in testing of hypothesis, Test Statistic for testing hypothesis about population mean; Tests concerning Means- the case of single population; Tests for Difference between two population means; Tests concerning population proportion- the case of single population; Tests for difference between two population proportions. **(5L)**

Unit 9 - Research Report Writing: Types of research reports – Brief reports and Detailed reports; Report writing: Structure of the research report- Preliminary section, Main report, Interpretations of Results and Suggested Recommendations; Report writing: Formulation rules for writing the report: Guidelines for presenting tabular data, Guidelines for visual Representations. **(5L)**

Unit 10- Ethics in Research: Meaning of Research Ethics; Clients Ethical code; Researchers Ethical code; Ethical Codes related to respondents; Responsibility of ethics in research **(4L)**

Suggested Readings:

1. Business Research Methods – Donald Cooper & Pamela Schindler, TMGH.
2. Business Research Methods – Alan Bryman & Emma Bell, Oxford University Press.
3. Research Methodology – C.R.Kothari, New age International Publishing House
4. Research Methodology—Ranjit Kumar, Sage Publication

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Mathematics for Computing
(GE3B-04)

Subject: Mathematics for Computing	
Course Code: (GE3B-04)	**Maximum Marks: 100**
Teaching Scheme	**Examination Scheme**
Theory: 3	**End Semester Exam: 70**
Tutorial:1	**Attendance: 5**
Practical:0	**Continuous Assessment: 25**
Credit:3	**Practical Sessional internal continuous evaluation: NA**
	Practical Sessional external examination: NA

Aim:

Sl. No.	
1.	To develop formal reasoning.
2.	Create habit of raising questions
3.	Knowledge regarding the use of Mathematics in Computer Science
4.	Ability to communicate knowledge, capabilities and skills related to the computer engineer profession

Objective:Throughout the course, students will be expected to demonstrate their understanding of Mathematics by being able to do each of the following

Sl. No.	
1.	To understand and solve mathematical problems
2.	To impart knowledge regarding relevant topics .
3.	To familiarize students with linear Algebra, differential and integral calculus, numerical methods and statistics.

Pre-Requisite:

Sl. No.	
1.	**Knowledge of basic algebra, trigonometry and calculus .**

Contents		**6 Hrs./week**	
Chapter	**Name of the Topic**	**Hours**	**Marks**

01	**Modern algebra** Set, Relation, Mapping, Binary Operation, Addition Modulo n, Multiplication modulo n, semi group, properties of groups, subgroup.	**3**	**7**
02	**Trigonometry** Radian or circular Measure, Trigonometric Functions, Trigonometric ratios of angle θ when θ is acute, trigonometric ratios of certain standard angles, allied angles, compound angles, multiple and sub- multiple angles.	**4**	**5**
03	**Limits and Continuity** The real number system, The concept of limit, concept of continuity.	**4**	**5**
04	**Differentiation** Differentiation of powers of x, Differentiation of ex and log x, differentiation of trigonometric functions, Rules for finding derivatives, Different types of differentiation, logarithmic differentiation, differentiation by substitution, differentiation of implicit functions, differentiation from parametric equation. Differentiation from first principles.	**5**	**7**
05	**Integrations** Integration of standard Functions, rules of Integration, More formulas in integration, Definite integrals.	**4**	**7**
06	**Differential equations** First order differential equations, practical approach to Differential equations, first order and first degree differential equations, homogeneous equations. Linear equations, Bernoulli's equation, Exact Differential Equations.	**4**	**6**
07	**Complex Numbers** Complex Numbers, Conjugate of a complex number, modulus of a complex Number, geometrical representation of complex number, De Moivre's theorem, n^{th} roots of a complex number.	**4**	**5**
08	**Matrices and Determinants** Definition of a matrix, Operations on matrices, Square Matrix and its inverse, determinants, properties of determinants, the inverse of a matrix, solution of equations using matrices and determinants, solving equations using determinants.	**5**	**8**
09	**Infinite Series** Convergence and divergence, series of positive terms, binomial	**4**	**7**

	series, exponential series,logarithmic series.		
10	**Probability** Concept of probability, sample space and events, three approaches of probability, kolmogorov's axiomatic approach to probability, conditional probability and independence of events, bay's theorem.	**5**	**5**
11	**Introduction to Statistics** Measures of central Tendency, Standard Deviation, Discrete series. Methods, Deviation taken from assumed mean, continuous series, combined standard deviation, coefficient of variation, variance.	**3**	**8**
	Sub Total:	**45**	**70**
	Internal Assessment Examination & Preparation of Semester Examination		**30**
	Total:	**45**	**100**

Assignments:

Based on the curriculum as covered by subject teacher.

List of Books

Text Books:

Name of Author	**Title of the Book**	**Edition/ISSN/ISBN**	**Name of the Publisher**
S. K. Mapa	Higher Algebra		Levant Books
O'Regan, Gerard	Mathematics in Computing		
Chakravorty and Ghosh	Advanced Higher Algebra		U N Dhar Pvt. Ltd
Reena Garg	Advanced Engineering Mathematics		Khanna Publishing House

Reference Books:

Das and Mukherjee	Integral Calculus		U N Dhar Pvt. Ltd
Das and Mukherjee	Differential Calculus		U N Dhar Pvt. Ltd
Reena Garg	Engineering Mathematics		Khanna Publishing House

Probability & Statistics
(GE3B-05)

Subject: Probability & Statistics	
Course Code: (GE3B-05)	**Maximum Marks: 100**
Teaching Scheme	**Examination Scheme**
Theory: 3	End Semester Exam: 70
Tutorial:1	Attendance: 5
Practical:0	Continuous Assessment: 25
Credit:3	Practical Sessional internal continuous evaluation: NA
	Practical Sessional external examination: NA

Aim:

Sl. No.	
1.	The aim of this course is to equip the students with standard concepts and tools at an intermediate to advanced level that will serve them well towards tackling various problems in the discipline.
2.	The objective of this course is to familiarize the students with statistical techniques.

Objective: Throughout the course, students will be expected to demonstrate their understanding of probability & statistics by being able to learn each of the following

Sl. No.	
1.	The ideas of probability and random variables and various discrete and continuous probability distributions and their properties.
2.	The basic ideas of statistics including measures of central tendency, correlation and regression.
3.	The statistical methods of studying data samples.

Pre-Requisite:

Sl. No.	
1.	Knowledge of basic algebra, calculus.
2.	Ability to learn and solve mathematical model.

Contents		**6 Hrs./week**	
Chapter	**Name of the Topic**	**Hours**	**Marks**
01	Definition of Partial Differential Equations, First order partial differential equations, solutions of first order linear PDEs; Solution to homogenous and nonhomogeneous linear partial differential equations of second order by complimentary function and particular integral method. Second-order linear equations and their classification, Initial and boundary conditions, D'Alembert's solution of the wave equation; Duhamel's principle for one dimensional wave equation. Heat diffusion and vibration problems, Separation of variables method to simple problems in Cartesian coordinates. The Laplacian in plane, cylindrical and spherical polar coordinates, solutions with Bessel functions and Legendre	**15**	**20**

	functions. One dimensional diffusion equation and its solution by separation of variables.		
02	Probability spaces, conditional probability, independence; Discrete random variables, Independent random variables, the multinomial distribution, Poisson approximation to the binomial distribution, infinite sequences of Bernoulli trials, sums of independent random variables; Expectation of Discrete Random Variables, Moments, Variance of a sum, Correlation coefficient, Chebyshev's Inequality. Continuous random variables and their properties, distribution functions and densities, normal, exponential and gamma densities.Bivariate distributions and their properties, distribution of sums and quotients, conditional densities, Bayes' rule.	**15**	**25**
03	Basic Statistics, Measures of Central tendency: Moments, skewness and Kurtosis - Probability distributions: Binomial, Poisson and Normal - evaluation of statistical parameters for these three distributions, Correlation and regression – Rank correlation. Curve fitting by the method of least squares- fitting of straight lines, second degree parabolas and more general curves. Test of significance: Large sample test for single proportion, difference of proportions, Tests for single mean, difference of means, and difference of standard deviations. Test for ratio of variances - Chi-square test for goodness of fit and independence of attributes.	**15**	**25**
	Sub Total:	**45**	**70**
	Internal Assessment Examination & Preparation of Semester Examination		**30**
	Total:	**45**	**100**

Assignments:

Based on the curriculum as covered by subject teacher.

List of Books

Text Books:

Name of Author	Title of the Book	Edition/ISSN/ISBN	Name of the Publisher
Erwin Kreyszig	Advanced Engineering Mathematics	9 th Edition	John Wiley & Sons
Reena Garg	Advanced Engineering Mathematics	Revised Edition	Khanna Publishing House
Manish Sharma, Amit Gupta	The Practice of Business Statistics	First Edition	Khanna Publishing House
N. G. Das	Statistical Methods	0070083274, 9780070083271	Tata Mc.Graw Hill
Reference Books:			
P. G. Hoel, S. C. Port and C. J. Stone	Introduction to Probability Theory		Universal Book Stall
W. Feller	An Introduction to Probability Theory and its Applications	3rd Ed.	Wiley

Bio Statistics
Paper Code: GE3B-06
Total Credit: 3

Sl.	Topic/Module	Hour
1.	**Module 1:** Statistics & Samples. Handling&PresentingNumericalInformation.Pie-Diagram,BarDiagram,Histogram,FrequencyPolygon.ScatterDiagram.	7
2	**Module 2:** Measures of Central tendency- mean, median & mode Measures of Dispersion variability-range standard deviation	7
3	Module 3 The Normal Distribution-characteristics Best Fitting Normal Distribution. Student's 't 'distribution. Data Collection for Vital Statistics:- Birth Deaths Featal Deaths	8
4	Module 4 Health Information: Data & Information HealthInformationSystem-components,uses,sourceBasicDescriptivemethods, Distribution table	7
5	**Module 5** Frequency distribution, Presentation of statistical data, Measure of central tendency and location Measures of dispersion	7
6	**Module6** Probability: Introduction, Measurement of Probability, Frequency Probability, Laws of probability for independent events, Conditional events Bayes' Theorem and its application in community screening programme Decision analysis Sampling variation and Bias Method of sampling, Sampling & non sampling errors. Test of significance, Standard errors, Chi-square test, Correlation &Regression	9

Suggested Reading:

1. AShortTextBookofMedicalStatistics-HillA.B,10thEd,ELBS
2. Elementary Statistics for Medical Workers, Indervir Singh, Jaypee Brothers
3. Element of Health Statistics-Rao NSN
4. Statistical Methods in the Biological & Health Science: J. Susan Milton (McGraw- hill)
5. An Introduction to Biostatistics, a manual for students in health sciences: P.S.S. Sunder Rao: J. Richard
6. AnintroductiontoProbability&Statistics,N.G.Das,Vol.1&II

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Website : www.wbut.ac.in

Course Name: **Data analysis with R**

Course Code: GE3B-07

Mode- Offline/ Blended **Credits: 3**

Course Objectives: The course has been designed to explore the R programming language, understand the different constructs it uses. The concept of data and data analysis and using R programming to perform basic statistical data analysis .You will learn how to install and configure software necessary for a statistical programming environment and describe generic programming language concepts as they are implemented in a high-level statistical language.

Sl.	Course Outcome	Mapped modules
1	Understanding the background and history of R	M1
2	Understanding the nuts and bolts of R	M2
3.	Understanding concept of basic programming in R	M3,M4
4	Understanding loops in R	M4
5	Understanding functions and Debugging in R	M5,M6
6.	Understanding simulation and profiling in R	M6

Module	Content	Total Hours	%ageof Questions	Blooms Level (if applicable)	Remarks (If any)
M1	Background, Getting Started	5	5	1	
M2	Basics of R programming	8	30	1,2,3	
M3	Subsetting	7	15	1,2,3	
M4	Control structures and Functions	12	30	1,2,3	
M5	scoping rules and Loop functions	8	15	1,2,3	
M6	Debugging tools,simulation and profiler	5	5	1,2	
		45	100		

Detailed Syllabus:

Module 1:

Getting started, Background: Installing R on Windows, Writing Code / Setting Your Working Directory (Windows), Overview and History of R,R Console Input and Evaluation,

Module 2:

Data Types - R Objects and Attributes,Vectors and Lists,Matrices,Factors,Missing Values,Data Frames,Names Attribute,Reading Tabular Data,Reading Large Tables,Textual Data Formats,Interfaces to the Outside World.

Module 3:

Subsetting– Basic,Lists,Matrices,Partial Matching,Partial Matching, Removing Missing Values,VectorizedOperations.Working with swirl.

Module 4:

Control structures: If-else, For loops, While loops,Repeat, Next, Break.
Functions: user defined functions, anonymous functions.

Module 5:

Scoping Rules - Symbol Binding, R Scoping Rules, Optimization Example ,Coding Standards.
Dates and Times

Module 6:

Loop Functions - lapply ,Loop Functions – apply, Loop Functions –mapply, Loop Functions – tapply, Loop Functions - split
Debugging Tools - Diagnosing the Problem, Basic Tools, Using the Tools
The str Function
Simulation - Generating Random Numbers, Simulating a Linear Model, Random Sampling, R Profiler.

Suggested Readings:

- R for Data Science Hadley Wickham ,Garrett Grolemund, O'REILLY
- R Programming for Beginners Paperback, SandipRakshit, Mcgrawhill
- R Programming for Data Science*Roger D. Penghttps://leanpub.com/rprogramming*
- Beginners Guide for Data Analysis using R Programming, Jeeva Jose.

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Website : www.wbut.ac.in

Course Name: **Learn Programming Fundamental with C**

Course Code: GE3B-08

Mode- Offline/ Blended **Credits: 3**

Career Objective: Programming is an increasingly important skill, whether you aspire to a career in software development, or in other fields. This course is the first in the specialization Introduction to Programming in C. Programming is fundamentally about figuring out how to solve a class of problems and writing the algorithm, a clear set of steps to solve any problem in its class. This course will introduce you to a powerful problem-solving process—the Seven Steps—which you can use to solve any programming problem. In this course, you will learn how to develop an algorithm, and then progress to reading code and understanding how programming concepts relate to algorithms.
The C language is particularly well suited as an introduction to coding: It's a tried-and-true language, and it allows understanding computing processes at a deep level.

Sl	Course Outcome	Mapped modules
CO1	Understanding program, programming and its requirements	M1
CO2	Understanding Algorithm	M2
CO3	Understanding Basic Data Type and Type conversion	M3
CO4	Understanding c programming fundamental, compiling Debugging, Running program	M4
CO5	Understanding Data Types flow of control	M5
CO6	Understanding Advance function recursion, array , pointer	M6

Detailed Syllabus:

Module	Content	Total Hours	%ageof questions	Blooms Level (if applicable)	Remarks (Ifany)
Module 1	will learn how to approach a programming problem methodically. This module discuss about to execute a piece of code by hand	8	10	2	
Module2	Discussion about the basic data types, "non-number" types, and complex, custom types	8	10	2	
Module 3	History of CCompiling, debugging, and running a program with different examples	8	20	2,3	
Module 4	Logical operators, expressions, and short-circuit evaluationThe conditional statement if and if-elseThe iterative statement	8	10	2	

Module 5	Enums as an ADTEnums codeThe C preprocessorUse assert for program correctnessAssert code Introduction to struc	6	25	2,3	
Module 6	Intro to the ADT listList of one element codeFull list codeDetails of list processingHonors: Introduction to binary trees	7	25	1,2,3	
		45	100		

Module 1-Discuss about a powerful process for solving any programming problem—the Seven Steps. You will learn how to approach a programming problem methodically, so you can formulate an algorithm that is specific and correct. This module discuss about to execute a piece of code by hand, and clearly illustrate what each statement does and what the state of the program is.
Module 2-This module discuss about types beyond integers, both their conceptual representations, and their hardware representations in binary. Discussion about the basic data types, "non-number" types, and complex, custom types
Module 3-History of CCompiling, debugging, and running a program, Compiling, debugging, and running a program Example - Circle codeExample – MarathonSimple input/output –Fahrenheit Simple input/output – milesCharacter sets and tokensCommentsKeywordsIdentifiersOperatorsExpressions and precedence Expression and evaluationDeclarationsFundamental types and size ofThe char type
Module 4-Logical operators, expressions, and short-circuit evaluationThe conditional statement if and if-elseThe iterative statement whilewhile-cnt-char-explained, while-code – exampleThe for statement and its while analogoddball operators-conditional and commaternary-operator code exampleBreak and continue and switch Function definition, Return statementFunction prototype, Function variables—with call-by-value explained, Function definitions and scope rulesSimple recursion, Recursion- factorial codeRecursion Fibonacci code, Pointers and simple arrays, initialize arraysWhat is a pointerCall-by-reference simulatedarray as a parameterarray-bubble-sort codemerge sort overview
Module 5-Discussion about:- Enums as an ADTEnums codeThe C preprocessorPreprocessor codeUse assert for program correctnessAssert code Introduction to struc (More advanced ADTs)How to access struct membersIntroduction to the ADT stackUsing a stack to reverse a string
Module 6-Discussion about:- Intro to the ADT listList of one element codeFull list codeDetails of list processingHonors: Introduction to binary trees Honors: Detailed binary tree codeIntroduction to File I/OBasic File/I/O codeDouble Spacing a FileUse of Main (argc, argv) Honors - List Code with deletion

Suggested Reading:

1) AICTE Prescribed Textbook: Programming for Problem Solving (with Lab Manual), Khanna Publishing House.
2) Let Us C by Yashavant Kanetkar

3) The C Programming Language" by Brian W Kernighan / Dennis Ritchie
4) Practical C: Programming for Problem Solving by Venkatesh, Nagaraju Y

Course Name: **Programming with Python**

Course Code: GE3B-09

Mode-Offline/Blended
Credits: 3

Course Objectives: This course is designed to teach everyone the basics of programming computers using Python. We cover the basics of how one constructs a program from a series of simple instructions in Python. The course has no pre- requisites and avoids all but the simplest mathematics. Anyone with moderate computer experience should be able to master the materials in this course. Once a student completes this course, they will be ready to take more advanced programming courses. This course covers Python 3. We will move past the basics of procedural programming and explore how we can use the Python built-in data structures such as lists, dictionaries, and tuples to perform increasingly complex data analysis. We will cover how one can treat the Internet as a source of data. We will scrape, parse, and read web data as well as access data using web APIs. We will work with HTML, XML, and JSON data formats in Python.

Sl	Course Outcome	Mapped modules
CO1	Understanding program, programming and its requirements	M1
CO2	Understanding decision statements and branching	M2
CO3	Understanding string anf file manipulation	M3
CO4	Understanding list and dictionaries with examples	M4
CO5	Understanding Tuples and regular expressions	M5
CO6	Understanding HTTP related to Python, JSON	M6

Module	Content	Total Hours	%age of questions	Blooms Level (if applicable)	Remarks (If any)
Module 1	Introduction to python , installation	3	10	1,2	
Module 2	Decision statement, functions, looping	8	10	1,2	

Module 3	String , files	8	20	1,2	
Module 4	List and dictionaries	8	20	1,2	
Module 5	Tuples and Regular expression	8	20	1,2	
Module 6	Networking, HTTP , web services, JSON	10	20	1,2,3	
		45	100		

Detailed Syllabus

Module 1- Definition of program, computer languages, python as language, installation of python, writing simple python code, data types (Basic) , expressions
Module 2- Conditional statements, using functions, working within functions, loops and iterators, definition of loop, different types of loops, functions, passing values to function
Module 3- String , Manipulating string, writing programing using string, Files and processing Files
Module 4- List , Manipulating list, list and string, dictionaries, counting with dictionaries, dictionaries and files
Module 5- Tuples , comparing tuples, dictionaries and tuples, using tuples as key in dictionaries, sequences , character matching in regular expression
Module 6- HTTP, retrieving images over HTTP, retrieving web pages with urllib, parsing HTML and scraping the web, XML, parsing XML, JSON, parsing JSON, security and API usage

Suggested Readings:

- AUTOMATE THE BORING STUFF WITH PYTHON, AL SWEIGART, NO STARCH PRESS
- Python: The Complete Reference , Martin C Brown, McGraw Hill Education
- Introduction To Python Programming, Venkatesh, Nagaraju Y
- Taming Python by Programming, Jeeva Jose, Khanna Book Publishing.
- https://docs.python.org/3/tutorial/index.html for References.

Course Code: GE3B-10

Mode- Offline/ Blended **Credits: 3**

Course Objectives: Learn to code in Java and improve your programming and problem-solving skills. You will learn to design algorithms as well as develop and debug programs. Using custom open-source classes, you will write programs that access and transform images, websites, and other types of data. Our goal is that by the end of this course each and every one of you feels empowered to create a Java program that's more advanced than any you have created in the past and that is personally interesting to you. In achieving this goal you will also learn the fundamentals of Object Oriented Programming, how to leverage the power of existing libraries, how to build graphical user interfaces, and how to use some core algorithms for searching and sorting data. This course is project-based, so we'll dive right into the project immediately!

Sl	Course Outcome	Mapped modules
CO1	Understanding programming, Java technology, architecture	M1
CO2	Understanding java class, data types, decision statements, loops	M2
CO3	Understanding string, CSV libraries, basic statistical operations	M3
CO4	Understanding objects, overloading, scope, memory Models	M4
CO5	Understanding GUI Programming , inheritance, polymorphism	M5
CO6	Understanding Event driven programming , Implementing algorithm (searching and sorting).	M6

Module	Content	Total Hours	%age of questions	Bloom s Level (if applicable)	Remarks (If any)
Module 1	Java technology and Architecture	3	10	2	
Module 2	Java class , data types, decision statements, loops	8	10	2	
Module 3	string, CSV libraries, basic statistical operations	8	20	2,3	
Module 4	Objects, overloading, scope, memory Models	3	10	2	
Module 5	GUI Programming , inheritance, polymorphism	8	25	2,3	
Module 6	Event driven programming , implementing algorithm (searching and sorting).	15	25	1,2,3	

		45	100		

Detailed Syllabus

Module 1- Definition of program and different programming languages, discussion on Java Technology, using BlueJ to program in Java, variables, operators, functions, conditions
Module 2- Classes, methods, types, looping, different types of loop, packages, writing basic programs.
Module 3- String, positions in string, java Math, using CSV libraries (Apache common CSV), devise algorithm about CVS data, analyze CVS data across multiple CVS files and applying basic statistics.
Module 4- Class and objects, create objects, overloading methods, private, public, memory models with primitive data, memory models with objects, introduction to scope.
Module 5- GUI in java, using PApplet, resizing image, color, canvas, loading/displaying image, setting up map visualization (image processing), Inheritance, Reference vs object types, visibility modifier, class hierarchy , method overriding, polymorphism, abstract class and interface
Module 6- Event driven programming, events in unfolding Maps, buttons in unfolding Maps, listerner Hierarchy, implementation of searching and sorting algorithms in java

Suggested Readings

- Java : The complete Reference , Herbert Schildt, McGraw Hill Education
- Image Processing in Java, Douglas A. Lynon, Prentice Hall.
- Data structures, Algorithms and Applications in Java, Sartaj Sahni, Universities Press.
- Interview Questions With JAVA/J2EE, Arunesh Goyal, Khanna Publishing House.
- C, C++, JAVA & J2EE Interview Questions (with ready Answers), R.N. Satpathy, Bimal Kumar Sahoo, Khanna Publishing House.
- https://docs.oracle.com/en/java/index.htm (Reference)

Course Name: Computer Graphics

Course Code: GE3B-11

Mode - Offline / Blended

Course Objective: The course is designed to make students understand various types of display device, color scheme, picture elements, understand the basic concept of drawings of geometric objects in digital device, understand the basic concept of geometric transformation of objects, clipping and curve, understand the concept of mathematical projection, hidden surface elimination.

Contents		6 Hrs./week	
Module	**Name of the Topics**	**Hours**	**Marks**
1	Application of Computer Graphics, Graphics Devices, Cathode Ray Tube, Liquid Crystal Device, Raster Scanning, Random Scanning, Refresh Rate, Resolution, Aspect Ratio, Frame Buffer, Refresh Buffer.	**5**	**8**
2	Points and Lines, DDA Line Drawing Algorithm, Bresenham's Line Drawing Algorithm, Midpoint Circle Drawing Algorithm, Bresenham's Circle Drawing Algorithm.	**8**	**10**
3	2D Geometric Transformation: Basic Transformation, Translation, Rotation, Scaling, Matrix Representation, Homogeneous Coordinates, Composite Transformations, Pivot Point Rotation, Fixed Point Scaling, Reflection, Shearing, General 3D Rotations, Translation, Scaling.	**12**	**25**
4	Window-to-Viewport Coordinate Transformation, Clipping Operations: Point Clipping, Line Clipping, Cohen-Sutherland Line Clipping Algorithm, Midpoint Subdivision Line Clipping Algorithm, Liang-Barsky Line Clipping Algorithm, Polygon Clipping, Sutherland-Hodgeman Polygon Clipping Algorithm.	**10**	**15**
5	Curve Generation, Interpolation & Approximation methods, Parametric Continuity Condition, Properties of Bezier Curve, Cubic Bezier Curve, Parallel Projection, Perspective Projection, Visible Surface Detection, Z-Buffer Method.	**10**	**12**
Sub Total:		**45**	**70**
Internal Assessment Examination & Preparation of Semester Examination			**30**

Total:	**45**	**100**

List of Experiments (Using C Programming):

1. Graphics Preliminaries with Different Shapes, Objects, Color Assignments.
2. Implementation of DDA Line Drawing Algorithm.
3. Implementation of Bresenham's Line Drawing Algorithm.
4. Implementation of Midpoint Circle Drawing Algorithm.
5. Implementation of Bresenham's Circle Drawing Algorithm.
6. Implementation of Simple Translation/Rotation/Scaling/Reflection of Geometric Objects.
7. Implementation of Composite Translation/Rotation/Scaling of Geometric Objects.
8. Implementation of Cohen-Sutherland Line Clipping Algorithm.
9. Implementation of Liang-Barsky Line Clipping Algorithm.
10. Implementation of Graphics Application (Moving Boat, Rotating Wheel, Olympic Symbol etc).

List of Books
Text Books:

Name of Author	Title of the Book	Edition/ISSN /ISBN	Name of the Publisher
Doland Hearn, M. Pauline Baker	Computer Graphics C Version	2nd	Pearson
Zhigang Xiang, Roy A. Plastock	Theory and Problems of Computer Graphics	2nd	Tata McGraw-Hill
Yashavant Kanetkar	Graphics Under C	3rd	BPB Publication

Reference Books:

Name of Author	Title of the Book	Edition/ISSN /ISBN	Name of the Publisher
James D. Foley, Andries Van Dam, Steven K. Feiner, F. Hughes John	Computer Graphics – Principles & Practice in C	2nd	Pearson
Anirban Mukhopadhyay, Arup Chattopadhyay	Graphics & Multimedia	2nd	Vikas

Paper: Computer basics and multimedia software
Paper Code: GE3B-12
Contact Hours/Week: 3L
Credit: 3

Objective: To understand the basic online and offline tools of information technology and implementation of them in contemporary industry requirement. Giving students a basic idea about Computer, Operating Systems, Ms Word, Excel, and Google tools alongside the knowledge and skills for making good presentations using MS Office or similar.

Course Content

		Hours
1	• Data and Information: Analog Vs Digital • Types of computer memory • Operating System: Windows, iOS, Android, Linux	10
2	• Basic Computer Language.	5
3	• MS Package: word, power point, excel, outlook • Networking and email: LAN, MAN, WAN, Baseband, Broadband.	10
4	• Basics of HTML. • Google tools: docs, slides, spreadsheets, forms, drive.	10
5	• Data Base Management System (DBMS).	10

SUGGESTED READINGS:

Computer Basics and C Programming, V Rajaram
HTML 5.0 For Beginners, Vinod Kumar Murugesan

Course Name: Data Analysis with SPSS
Course Code:GE3B-13

Mode- Offline/Blended **Credits:3**

Course Objective:

The main objective of the course will be on to solve their research question using SPSS software. As We know that, students are facing problem specially who are pursuing research in their subject that how to manage and analyze the data after collection of survey questionnaire. Course will be focus on how to analyze survey questionnaire using SPSS software? Also students should make aware to choose appropriate statistical technique and interpret results. This software will help to train students in SPSS Software also help to expose the students to the analysis of statistical data

SI	**Course Outcome**	**Mapped modules**
CO1	Understanding SPSS interface,type of data	M1
CO2	Understanding to work with data file, table looks, changing font style and size.	M2
CO3	Understanding to work with various kind of diagram	M3
CO4	Understanding to work with descriptive statistics and correlation with SPSS	M4
CO5	Understanding to work with testing of hypothesis	M5

Learning Outcome/ Skills:

- Students will be able to operate the SPSS interface, import files, work with handling data.
- Students will be able to analysis data through diagram.
- Students will be able to work descriptive statistics using SPSS.
- Students will be able to test the hypothesis using SPSS.

Module	Content	Total Hours	% of questions	Blooms Level (if applicable)	Remarks (if any)
Module1	Interface	5	15	1	
Module2	Data handling	10	15	2.2	
Module3	Diagrammatic representation	10	20	2	
Module4	Descriptive Statistics	10	25	2.3	
Module5	Testing of Hypothesis	10	25	2.3	
	TOTAL	45	100		

Module -1: Interface:

Windows, types of windows, variable name, variable labels in dialog box, data type, measurement level, variable list, auto recovery, restore point.

Total hours: 5

Module-2: Data handling:

Open SPSS data file, save file, import from other data source, data entry, labeling for dummy numbers, recode in to same variable, recode in to different variable, transpose of data, insert variables and cases, merge variables and cases. Data handling: Split – select cases – compute total scores – table looks – Changing column - font style and sizes

Total hours: 10

Module-3: Diagrammatic representation:

Simple Bar diagram – Multiple bar diagram – Sub-divided Bar diagram - Percentage diagram - Pie Diagram – Frequency Table – Histogram – Scatter diagram – Box plot.

Total hours: 10

Module-4: Descriptive Statistics:

Mean, Median, Mode, SD- Skewness- Kurtosis. Correlation – Karl Pearson's and Spearman's Rank Correlation, Regression analysis: Simple and Multiple Regression Analysis.

Total hours: 10

Module-5: Testing of Hypothesis:

Parametric – One sample – Two sample Independent t – test – Paired t – test. Non – parametric: One sample KS test- Mann-Whitney U test – Wilcoxon Signed Rank test - Kruskal Wallis test – Friedman test- Chi- square test. Analysis of variance: One way and Two-way ANOVA

Total hours: 10

References:

1. Beginners Guide for Data Analysis using R Programming, Jeeva Jose, Khanna Publishing House.
2. Data Science and Data Analytics Using Python, Munesh Chandra Trivedi, Anil Kumar Dubey, Khanna Publishing House.
3. Clifford E. Lunneborg (2000). Data analysis by resampling: concepts and applications. Dusbury Thomson learning. Australia.
4. Everitt, B.S and Dunn, G (2001). Applied multivariate data analysis. Arnold London.
5. Jeremy J. Foster (2001). Data analysis using SPSS for windows. New edition. Versions 8-10. Sage publications. London.
6. Michael S. Louis – Beck (1995). Data analysis an introduction, Series: quantitative applications in the social sciences. Sage. Publications. London.

(GE4B-01): ENTREPRENEURSHIP THEORY & PRACTICE

Credit Point:3.

Course Objective

1. To understand the function of the entrepreneur in the successful, commercial application of innovations.
2. To investigate methods and behaviours used by entrepreneurs to identify business opportunities and put them into practice.
3. To discuss how ethical behavior impacts on business decisions for a selected business startup.
4. To get better knowledge about the necessary traits for an Entrepreneurs.
5. To build and check the feasibility of business projects and the development of the projects for the same.
6. To provide the overview of Business Ethics and its importance.
7. To understand the various Management and Business scenarios of Ethics.
8. To get the overall knowledge on corporate culture and its impact on business.

Course Outcomes (CO):

SL NO.	Course Outcome	Mapped Modules
1.	This will help to understand the basics and needs of Entrepreneurship.	Module I - Unit 1
2	This will help Entrepreneurs develop the need and nature so, that they can run their business.	Module I - Unit 2
3	This unit helps to generate startups with various business decisions.	Module I - Unit 3
4	Helps the student to develop certain skills of Entrepreneurship.	Module I - Unit 4
5	This helps to develop business projects which develop to build business projects.	Module II - Unit 5
6	Student will able to describe examples of entrepreneurial business and actual practice, both successful and unsuccessful, and explain the role and significance of entrepreneurship as a career, in the firm, and in society.	Module II - Unit 6

7	Student will able to understand the importance and role of ethical, sustainability, innovation and global	Module II - Unit 7

	issues for strategic decision making.	
8	Student will evaluate different modes of entering into enterpreurship. Student will able to understand the importance and role of ethical, sustainability, innovation and global issues for strategic decision making.	Module II - Unit 8

Module I

Unit1:Introduction to Entrepreneurship [3L]

Theories of Entrepreneurship, Role and Importance of Entrepreneur in Economic Growth.

Unit 2: Entrepreneurial Behaviour [10L]

Entrepreneurial Motivation, Need for Achievement Theory, Risk-taking Behavior, Innovation and Entrepreneur

Unit 3: Entrepreneurial Traits [6L]

Definitions, Characteristics of Entrepreneurs, Entrepreneurial Types, Functions of Entrepreneur

Unit 4: Project Feasibility Analysis [8L] Business Ideas – Sources, processing; Input Requirements, Sources of Financing, Technical Assistance, Marketing Assistance, Preparation of Feasibility Reports, Legal Formalities and Documentation.

Module II

Unit 5: Creativity [4L]

Introduction – Meaning - Scope – Types of Creativity – Importance of Creativity – Steps of Creativity

Unit 6: Innovation [4L]

Introduction –Steps in Innovation – Stages of of Innovation – Technology aspects in Innovation.

Unit 7: Understanding the Market [4L]

Types of Business: Manufacturing, Trading and Services – Market Research - Concept, Importance and Process - Market Sensing and Testing

Unit 8: Resource Mobilization [6L]

Types of Resources - Human, Capital and Entrepreneurial tools and resources- Selection and utilization of human resources and professionals like Accountants, Lawyers, Auditors, Board Members, etc. Role and Importance of a Mentor- Estimating Financial Resources required. Methods of meeting the financial requirements – Debt vs. Equity

Suggested Readings:

1. Entrepreneurship, Arya Kumar, Pearson.
2. Developing Thinking Skills (The Way to Success), E Balaguruswamy, Khanna Book Publishing.
3. Introducing Entrepreneurship Development, Chakraborty, Tridib, Modern Book Agency.
4. Entrepreneurial Policies and Strategies, Manimala, M.J., TMH
5. Everyday Entrepreneurs - The harbingers of Prosperity and creators of Jobs , Dr. Aruna Bhargava.

Subject: Accounting
Course Code: GE4B-02

Subject: Accounting	
Course Code: GE4B-02	**Maximum Marks:** 100
Teaching Scheme	**Examination Scheme**
Theory: 3	**End Semester Exam**: 70
Tutorial:	**Attendance:** 5
Practical:0	**Internal Assessment**: 25
Credit: 3	**Practical Sessional internal continuous evaluation**:
	Practical Sessional external examination:

Aim:	
Sl. No.	
1.	Build a foundation to understand the various concepts of Financial Accounting
2.	Gain a better understanding of Accounting Mechanics, Accounting Standards and dealing with Financial Statements of Companies

Objective:	
Sl. No.	
1.	To articulate the financial concepts of accounting in companies
2.	To gain a clear understanding of Financial Accounting with the help of case studies

Pre-Requisite:	
Sl. No.	
1.	NA

Contents		**Hrs./week**	
Chapter	**Name of the Topic**	**Hours**	**Marks**
01 Introduction to Accounting	• Introduction to concepts of Accounting • Concept and necessity of Accounting • An Overview of Income Statement and Balance Sheet.	3	6
02 Introduction and Meaning of GAAP	• Introducing the meaning of GAAP • Concepts of Accounting • Impact of Accounting • Concepts on Income Statement and Balance Sheet.	3	
03 Accounting Mechanics	• Understanding of Accounting Mechanics • Process leading to preparation of Trial Balance and Financial Statements	3	
04 Preparation of Financial Statements	• Understanding the Preparation of Financial Statements with Adjustment Entries.	3	6

with Adjustment Entries.			
05 Revenue Recognition and Measurement	• Describing Revenue Recognition and Measurement • Capital and Revenue Items • Treatment of R & D Expenses • Preproduction Cost • Deferred Revenue Expenditure etc.	4	6
06 Fixed Assets and Depreciation Accounting	• Describing Fixed Assets and Depreciation Accounting • Evaluation and Accounting of Inventory	3	6
07 Preparation and Complete Understanding of Corporate Financial Statements	• Preparation and Complete Understanding of Corporate Financial Statements • 'T' Form and Vertical Form of Financial Statements.	3	6
08 Important Accounting Standards	• Corporate Financial Reporting – Analysis of Interpretation thereof with reference to Ratio Analysis. Fund Flow, Cash Flow. • Corporate Accounting. Accounting of Joint Stock Companies: Overview of Share Capital and Debentures, Accounting for Issue and forfeiture of Shares, Issue of Bonus Share, Issue of Debentures.	5	6
09 Financial Statements of Companies	• Financial Statements of Companies: Income Statement and Balance Sheet in Schedule VI. Provisions of the Companies Act: Affecting preparation of Financial Statements, Creative Accounting, Annual Report, Presentation and analysis of Audit reports and Directors report. (Students should be exposed to reading of Annual Reports of Companies both detailed and summarized version).	**5**	6
10 Inflation Accounting & Ethical Issue in Accounting	• Describing Inflation Accounting & Ethical Issue in Accounting	**3**	6
11 Case Studies and Presentations	• Case Studies and Presentations	**10**	**10**
	Sub Total:	**45**	**70**
	Internal Assessment Examination & Preparation of Semester Examination		**30**
	Total:		**100**

List of Books
Text Books:

Name of Author	Title of the Book	Edition/ISSN/ISBN	Name of the Publisher
P C Tulsian ,	Financial Accounting	2002/ 9788177582284	Pearson
Gregory Becker	Accounting Principals:The ultimate Begineers Guide to Accounting	978-1081670290	Pearson
Manish Sharma, Amit Gupta	The Practice of Business Statistics	978-9380016511	Khanna Publishing House
Reference Books:			
M C ShuklaS C GuptaT S Grewal	Advanced Accounting Vol - I	2018/ 978-9352533022	S.CHAND
M C ShuklaS C GuptaT S Grewal	Advanced Accounting Vol - II	2018/ 978-8121911009	S.CHAND

(GE4B-03): PRINCIPLES OF MANAGEMENT & ORGANIZATIONAL BEHAVIOUR

Credit Point 3

Course Objective

1. To help the students to develop cognizance of the importance of management principles.
2. To understand the planning process in the organization.
3. To enable them to analyze and understand the environment of the organization.
4. To study the system and process of effective controlling in the organization.
5. To understand the concept of behavior in a organizational settings & to explain, predict and influence behavior of others.
6. To help the students to develop the concepts of Human Behaviour.
7. To know the concept of motivation &how to motivate people for their work according to various theories.
8. To enable them to understand the group behavior & the communication process in an organization.
9. To help the students to develop the process of leading individuals, managing conflicts.
10. To enable them to understand the culture of the organization & execute the strategy according to the situation.

Course Outcomes (CO):

SL NO.	Course Outcome	Mapped Modules
1	Students will be able to have clear understanding of managerial functions like planning, and have same basic knowledge on international aspect of management	Module I – Unit 1
2	Students will be able to explain the relationship between strategic, tactical and operational plans	Module I – Unit 2
3	Students will be able to understand the concept of organization.	Module I – Unit 3
4	Students will be able to analyze isolate issues and formulate best control methods	Module I – Unit 4
5	Students will be able to develop insight on how employees behave & perform in the workplace.	Module II – Unit 5
6	Students will get knowledge to improve personal adjustment & interpersonal relationship	Module II – Unit 6

7	Students will be able to analyze & compare different models used to explain individual behavior related to motivation & rewards.	Module II – Unit 7
8	Students will be able to explain group dynamics & demonstrate skills required for working in groups.	Module II – Unit 8
9	Students will learn to explore & will develop a sense of confidence & belief in themselves & their ideas.	Module II – Unit 9
10	Students will be able to understand that how organizational culture influences the behavior of organizational members.	Module II – Unit 10

Module I

Unit 1: Introduction to **Management [3L]**

Nature, purpose and scope of management, Skills and roles of a Manager, Functions, Development of Management Theories (Classical, Neo-Classical and Modern)

Unit 2: Planning Process [4L]

Types of plans, Levels of planning, planning process, Management by objectives, Strategic Management, premising and forecasting; Decision-Making process, barriers, styles of decision making

Unit 3: Organizing Procedure [5L]

Organizational design and structure, Coordination, centralization and de- centralization, Delegation, Authority & power – concept & distinction, Line and staff organizations.

Unit 4: Controlling System [5L]

Concept, planning-control relationship, process of control, Types of Control, Control Techniques, and Staffing: Human Resource Management and Selection

Module II

Unit 5: Introduction to Organizational Behaviour [3L]

The nature and determinants of organizational behaviour, need for knowledge of OB, contributing disciplines to the field, OB Model

Unit 6: Individual differences [5L]

Learning, Values, attitudes, Personality (MBTI, Big Five Model), Emotional Intelligence, Perception, Attribution theory

Unit 7: Work Motivation[5L]

Early Theories (Mc. Gregory's Theory X & Y , Abraham Maslow's Need Hierarchy Theory Herzberg's Two Factor Theory) & Contemporary Theories (Mc. Clelland's 3 Needs Theory , Alderfer's ERG

Theory , Adam's Equity Theory & Vroom's Expectancy Theory, Goal Setting Theory), Application of Motivation Theories & workers participation management.

Unit 8: Group Behaviour[5L]

Types of Groups, Stages of Group Development, Group Decision Making, understanding Teamwork: Types of Teams, Creating Effective teams, Communication: significance, types, barriers, overcoming barriers.

Unit 9: Leadership[5L]

Basic Approaches (Trait Theories, Behavioral Theories & Contingency Theories) & Contemporary Issues in Leadership. Conflict: levels of conflict, resolving conflicts; power and politics: sources of power, use of power

Unit 10: Organization culture and Change[5L] Effects of culture, changing Organizational culture forces of change, Resistance to change, the change process.

Suggested Readings:

1. Principles of Management, Premvir Kapoor, Khanna Book Publishing Company, New Delhi.
2. Management, Robbins, Stephen P, and Mary Coulter, Prentice Hall, New Delhi. Robbins, Stephen P: Organizational Behavior" Prentice Hall
3. Principles of Management, Govindarajan & Natarajan, Prentice Hall of India Private Limited.
4. Management, Stoner, Freeman & Gilbert, Jr., Prentice Hall of India private Limited
5. Organizational Behavior: Human Behavior at Work, Newstrom, John W. and Keith Davis, Tata McGraw-Hill.

(GE4B-04): BASICS OF ACCOUNTING AND FINANCE IN HEALTHCARE MANAGEMENT

Credit Point: 3

Course Objective

1. To understand the meaning of accounting, different accounting concepts and principles.
2. To understand the rules of journal, ledger and trial balance.
3. To understand different concepts and methods of depreciation and provision.
4. To understand the preparation of final accounts with different adjustment.
5. To understand the knowledge of business finance, financial management and management decision.
6. To understand the concept and classification of working capital and importance of working capital management.

Course Outcomes (CO):

SL NO.	Course Outcome	Mapped Modules
1	Ability to know the objective and advantages of accounting.	Module I – Unit 1
2	Ability to know how to record the journal entries, posting to the ledger and preparation of trial balance.	Module I – Unit 2
3	Ability to calculate depreciation by applying various methods.	Module I – Unit 3
4	Ability to prepare trading account, profit & loss account and balance sheet along with different	Module I – Unit 4
	adjustments.	
5	Ability to determine the value and wealth maximization of business and scope of financial management.	Module II – Unit 5
6	Ability to compute working capital using both the cash cost approach and the operating cycle approach.	Module II – Unit 6

Module 1

Unit1: Meaning and Scope of Accounting[3L] Accounting: meaning, Objective, Scope and Advantages; Accounting Principles: GAAP, Accounting Concepts and Accounting Conventions; Cash Basis and Accrual Basis of Accounting.

Unit2: Recording of Business Transactions[10L] Accounting Cycle, Golden Rule of Accountancy, Journal, Ledger, Trial Balance, Capital and Revenue expenditure.

Unit 3: Depreciation and Provision[6L] Concept of Depreciation;Causes of Depreciation; Depletion, Amortization; Depreciation accounting; Methods of recording depreciation; Straight line and Diminishing Balance method.

Provision and Reserve: Preparation of provision for doubtful debt account, provision for discount on Debtors, provision for discount on Creditors, Differentiate between Provision and Reserve.

Unit4: Preparation of Final Accounts[10L] Trading account; Profit and Loss Account; Balance Sheet; Adjustment entries with respect to Closing stock, Outstanding Expenses, Prepaid Expenses, Pre-received Income, Accrued Income, Depreciation, Provision for Bad Debts, Stock lost by Fire, Goods withdrawal by Proprietors, Free sample

Module II

Unit 5: Introduction to Financial Management [6L]

Meaning, Core Elements, Objectives and Scope, Role of Finance Manager, Profit Vs Goal Maximization, Investment Decision, Financing Decision, Dividend Decision.

Unit6: Working Capital Management[10L] Definition, Classification of Working Capital Management, Factors of Working Capital Management, Operating Cycle, Practical problem on Working Capital Requirement.

Suggested Readings:

1. Financial Accounting, Ashoke Banerjee, Excel Books
2. Financial Accounting, Basu & Das, Rabindra Library
3. Financial Accounting, M. Hanif, A. Mukherjee, TMH.
4. Financial Management: Theory and Practice, Chandra, P., TMH.
5. Financial Management, Pandey, I.M., Vikas Publishing House Pvt. Ltd.

(GE4B-05) : MACRO ECONOMICS IN BUSINESS

Credit Points– 3

Course Objectives

1. To understand the differentiation between macro & micro economics and scope of macro economics
2. To demonstrate the concepts of national income accounting with all the measurement parameters
3. To determine the concept of multiplier in the economy along with income and savings function
4. To describe IS LM framework and effectiveness of the fiscal & monetary policy
5. To understand the concepts of demand and supply of money with understanding of effects of inflation in the economy
6. To explore the concepts of balance of trade and payment with international trade theories.

Course Outcome

SL NO.	Course Outcome	Mapped Modules
1.	Students will be able to define macroeconomics	Unit 1
2	Students will be able to explain how economic indicators like GDP are used to assess the state of the economy and differentiate between and calculate nominal and real GDP	Unit 2
3	Students will be able to examine factors that shift aggregate supply and aggregate demand & explain why multiplies works and how to calculate its size	Unit 3
4	Students will be able to understand fiscal policies, including automatic, expansionary, and contractionary fiscal policies along with how monetary policy affects GDP and the interest rates and will establish general equilibrium in real and monetary sector	Unit 4
5	Students will be able to define money & inflation, explain the functions of money, and define liquidity and how money is created by lending, demonstrate the controlling measures of inflation.	Unit 5
6	Students will be able to understand Balance of Payment statement & international trade theory	Unit 6

MODULE I

Unit 1: Concepts of Aggregate demand & supply

Macroeconomics – scope and basic concepts, Concept of Aggregate Demand and Aggregate Supply, Marginal Propensity to Consume(MPC), APC, MPS, MPI: Basic concepts Only, Paradox of thrift. (8L)

Unit 2: National Income

National Income Accounting - Concepts and measurement of GDP, GNP, NNP, NI and DPI - Circular flow of income – Real and Nominal GDP –Implicit deflator. (10L)

Unit 3: Income Determination

Theory of Equilibrium Income Determination: Simple Keynesian Model; Consumption, saving and investment functions – National income determination; Investment and Government expenditure multipliers (10L)

MODULE II

Unit 4: IS-LM framework

Commodity market and Money market equilibrium; Derivation of IS and LM curves –Shifts of IS and LM curves-equilibrium in IS-LM model – Effectiveness of monetary and fiscal policies. (8L)

Unit 5: Money and Inflation

Concept of demand for and supply of money. Quantity theory of money and Keynesian theory of demand for money. Measures of money supply – High powered money – Money multiplier. Concept of Inflation – Demand-pull and cost-push theories of inflation – Monetary and fiscal policies to control inflation – Instruments, objectives and limitations. (12L)

Unit 6: Balance of Payments

Items of BOP, Causes of Disequilibrium in BOP, Strategies to Correct Adverse BOP Situation, Purchasing Power Parity Theory (Only basic concept), Absolute and Comparative Cost Advantage Theory, Gains from international trade. (12L)

Suggested Readings

1. W. H. Branson, Macro Economic Theory and Policy
2. Joydeb Sarkhel, Macro Economic Theory
3. Banerjee & Majumdar, Fundamentals of Business Economics
4. Dornbusch, Fischer & Startz, Macroeconomics, TMH
5. Debes Mukherjee: Essentials of Micro and Macro Economics, Central
6. Premvir Kapoor, Sociology & Economics for Engineers.

(GE4B-06) : BUSINESS REGULATORY FRAMEWORK

Credit Points- 3

Course Objectives

1. To understand the Basic Concepts of Indian Contract Act 1872.
2. To understand the concept of Sale of Goods Act 1930.
3. To know the concept of Negotiable Instrument Act 1881.
4. To know the concept of Consumer Protection Act 1986.
5. To understand the concept of Companies Act 2013
6. To explore the issues related to IT act 2000.

Course Outcomes (CO)

Sl. No	Course Outcome	Mapped Modules
1	Memorize the Basic Concepts of Indian Contract Act	Module I/ Unit 1
2	Understand the concept of Sale of Goods Act	Module I/ Unit 2
3	Memorize the concept of Negotiable Instrument Act.	Module I / Unit 3
4	Memorize the concept of Consumer Protection Act.	Module II/ Unit 4
5	Understand the concept of Companies Act 2013	Module II/ Unit 5
6	Learn the concepts of IT act 2000	Module II/ Unit 6

MODULE I

Unit 1: Indian Contract Act 1872

Elements of contract -Offer and Acceptance - Consideration - Legal capacity -Intention to create legal relations - Free Consent -Legality of the Object - Possibility of Performance - Void and Voidable Agreement-Contingent Contract -Discharge of Contract-Indemnity and Guarantee-Quasi Contract -Bailment and Pledgement - Agency Contract. (12L)

Unit 2: Sale of Goods Act 1930

Formation of contracts of sale-Goods and their classification, price -Conditions &Warranties-Performance the contract of sale - Unpaid seller and his rights-Hire Purchase agreement, Auction (12L)

Unit 3: Negotiable Instrument Act 1881

Definition of negotiable instruments- Features-Types of negotiable instruments -Dishonor of a Negotiable Instrument (10L)

MODULE II

Unit 4: Consumer Protection Act 1986
Concept - Consumer protection Councils -Dispute Redressal Procedures (10L)

Unit 5: Companies Act 2013
Concept -Type of Companies- steps in formation of a company-Concept and features of AOA MOA and prospectus –Meetings (10L)

Unit 6: Information Technology Act 2000
Overview of Computer and Web Technology , Need for Cyber Law , Cyber Jurisprudence at International and Indian Level , Jurisdictional Aspects in Cyber Law , Issues of jurisdiction in cyberspace , Types of jurisdiction ,Prerequisites of jurisdiction, Cyber Crimes , Cyber Crimes Vs. Conventional Crime, Reasons for cybercrimes and cyber criminals ,Cyber Crimes against Individuals, Institution and State. (6L)

Suggested Readings

1. Sen & Mitra: Commercial law; World Press
2. Pathak: Legal Aspect of Business, TMH
3. Das & Ghosh: Business Regulatory Framework: Ocean Publication, Delhi 4.Pillai & Bagavathi: Business law ,S Chand
6. Tulsian: Business law: Tata Mcgrawhill

Course: Decision Support System
Code: GE4B-07
Credits:3

Course Objective:

1. To review and clarify the fundamental terminologies, ideas and concepts associated with Decision Support Systems and other aligned systems.
2. To discuss and grow skills in the analysis, design and implementation of computerized Decision Support Systems.
3. To understand and evaluate the importance of Decision Support Systems in organizational and social context.

Sl	Course Outcome	Mapped modules
1	Remembering	M1, M2, M3, M4, M5, M6
2	Understanding the course	M1, M2, M3, M4, M5, M6
3	Applying the general problem	M3, M4, M5, M6
4	Analyse the problems	M2, M4, M5.
5	Evaluate the problems after analysing	M2, M3.
6	Create using the evaluation process	M1, M2 (Case study), M3, M4, M5, M6.

Module Number	Content	Total Hours	%age of questions	Bloom's Level (if applicable)	Remarks (If any)
M 1	Introduction	10	10	L1, L2	
M 2	Application of DSS techniques	10	25	L1, L2, L4	
M 3	Excel Basics	7	10	L1, L2, L3	
M 4	Advanced excel functions	6	25	L1, L2, L3, L4	
M 5	Pivot tables and statistical functions	6	25	L1, L2, L3, L4	
M6	Intro to VBA	6	5	L1, L2, L3	
		45	**100**		

Paper Code: GE4B-07
Decision Support System
Total Credit: 3

Sl.	Topic/Module	Hour
1.	**Module 1:** Understand concepts of a Decision Support System (DSS) and its effect on management, purpose of a DSS. Data warehousing, Differentiate between the data warehouse, Data Marts, and Data Mining. Differentiate between OLAP and OLTP systems. Contrast data, information, and knowledge as they apply to the DSS. Define computer-based inferencing. Discuss various tools assisting IT professionals surrounding DSS.	10
2.	**Module 2**: Application of DSS techniques to real-world scenarios and situations Construct an expert system using a programming language or the Microsoft Office suite of tools. Perform data analysis using Microsoft Excel pivot tables. Apply the Nominal Group Technique (NGT) and the Delphi method. Use linear programming methods to solve multivariate problems.	10
3.	**Module 3**: Excel Basics, Formatting, Referencing and Names, Functions and Formulas, Charts: When to use which chart.	7
4.	**Module 4** : Advanced excel functions: vlookup, hlookup, fuzzy lookup, match, index, statistical functions, etc.	6
5.	**Module 5**: Pivot Tables, Statistical Analysis , The Solver and other tools (what-if analysis etc).	6
6.	**Module 6**: Intro to VBA, Recording Macros, Objects and Variables.	6

Suggested Readings:

1. Clyde W. Holsapple: Decision Support Systems: A Knowledge Based Approach, West Group
2. Douglas Schwartz : Decision Support Systems, Clanrye International
3. Clyde W. Holsapple: Decision Support Systems: Theory and Application, Springer-Verlag .
4. Manish Nigam: Advance Excel 2019 Training Guide: Tips and tricks to kick start your excel skills, BPB Publications.
5. Wayne Winston: Microsoft Excel Data Analysis and Business Modeling, Microsoft Press.

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Website : www.wbut.ac.in

Course Name: **Entrepreneurship: Launching an Innovative Business**

Paper Code: GE4B-08

Mode:Offline/Blended
Credits: 3

Course Objective: -

This course will assist aspiring and active entrepreneurs in developing great ideas into great companies. With strong economies presenting rich opportunities for new venture creation, and challenging economic times presenting the necessity for many to make their own job, the need to develop the skills to develop and act on innovative business opportunities is increasingly vital.This course will also help the aspiring or active entrepreneurs who want to understand how to secure funding for their company.

Course Outcome (CO):-

Sl No.	Course Outcome	Mapped Modules
1	Identifying and analyzing entrepreneurial opportunities	M1, M2, M3, M4, M5, M6
2	Enhancingentrepreneurial mindset	M1, M2
3	Improvingstrategic decision-making	M1, M2, M3, M4
4	Developing the ability to build innovative business models	M1, M3, M4
5	Exploring kinds of investors invest by stage	M5, M6
6	Understanding different fund-raising options	M5, M6

Module No.	Content	Total Hours	%age of Questions	Blooms Level	Remarks
M1	Introduction to Innovation and Entrepreneurship	12	20	1,2,3	
M2	Entrepreneurial Mindset, Motivations, and Behaviors	10	20	1,2	
M3	Industry Understanding	10	15	1,2	
M4	Customer Understanding and Business Modeling	12	20	1, 2, 3	
M5	Early Stage Investment Landscape	10	15	1, 2	
M6	Sources of Capital for the Early Stage Company	6	10	1, 2	
		60	100		

Detailed Syllabus:-

Module- 1:- Introduction to Innovation and Entrepreneurship

What is entrepreneurship, Who is an entrepreneur, Entrepreneurship, creativity, & innovation, entrepreneurial opportunities, factors influence the feasibility of an innovation,The world's most

innovative companies, Types of innovation, Entrepreneurs and strategic decisions, The opportunity analysis canvas.

Module- 2:-Entrepreneurial Mindset, Motivations, and Behaviors

Introduction to entrepreneurial mindset, motivations, and behaviors, Entrepreneurial mindset, Entrepreneurial motivations, How to decide to become an entrepreneur?, Entrepreneurial behaviors, Risk taking in entrepreneurial decision-making, Risk, uncertainty, and stakeholder involvement.

Module- 3:-Industry Understanding

Introduction to industry understanding, Knowledge conditions, Demand conditions, Industry lifecycle, Industry structure, Competitive advantage, Learning curve, Complementary assets, Reputation effects, Product-market fit.

Module- 4:-Customer Understanding and Business Modeling

Introduction to customer understanding, Macro changes that increase new venture opportunities, How can government and entrepreneurs work together, Why is skills training and development important for entrepreneurs and government?, Exploring real market needs, Satisfying real market needs, Strategic positioning, Strategic planning, Value innovation, Opportunity identification.

Module- 5:-Early Stage Investment Landscape

New Venture Finance, Investment landscape, What are the information venture capitalists look for in a "good plan", What are the financial statements investors want to see, Howto develop a balance sheet, content of an income statement, purpose of the cash flow statement.

Module- 6:-Sources of Capital for the Early Stage Company

Sources of capital, Where to find investors, consider friends and family as investors, What's bootstrapping, Are incubators and accelerators a fit, What are angel investors.

Suggested Readings:

1. Entrepreneurship, Innovations & Start-Ups in Indiaby Dr Savita Joshi; New Century Publications
2. Developing Thinking Skills (The Way to Success), E Balagurusamy, Khanna Publications.
3. A Practical Guide to Entrepreneurship: Be Your Own Boss by Alison Price and David Price.
4. Innovision, Chelat Bhuvanachandran, Khanna Book Publishing.
5. Fundamentals of Entrepreneurship by Dr. G.K. Varshney.
6. Fundamentals of Entrepreneurship by N.K. Jain.
7. Management and Entrepreneurship by Havinal Veerabhadrappa, New Age International (P) Ltd.
8. Entrepreneurship: Theory and Practice by Raj Shankar; McGraw Hill Education.
9. Entrepreneurship: Development and Management by Dr. Vasant Desai and Dr. Kulveen Kaur; Himalaya Publishing.
10. Entrepreneurship Development & Management by Dr. R.K. Singal.
11. Fundamentals of Entrepreneurship by Dr. A.N. Bharti, Dr. Vishwjeet Singh, Sanjay Gupta, Dr. Pramod Kumar.
12. Entrepreneurship: Text and Cases by P Narayana Reddy, Cengage Learning.

Course name: **HANDLING HUMAN RESOURCES IN WORKPLACES**

Paper Code: GE4B-09

Mode-Offline/Blended **Credits: 3**

Course Objectives: The course has been designed to explore the Human Resource Management concept. The learner will be able to apply the knowledge of recruitment, selection, appraisal, training, compensation and effect on the personal and professional.

Sl	Course Outcome	Mapped modules
CO1	Explaining the concept Human Resource, functions, history, scope	(M1)
CO2	Understanding the Recruitment, Selection	(M2)
CO3	Explaining the concept of Training, Performance Appraisal	(M3)
CO4	Explain the concept Wage and salary and attrition	(M4)
CO5	Understanding new policies of Human Resource Management	(M5)
CO6	HRD in Public ,private and MNCs	(M6)

Module	Content	Total Hours	%ageofquestions	Blooms Level (ifapplicable)	Remarks (If any)
Module 1	Explaining the concept Human Resource, functions, history, scope	6	15	2	
Module 2	Understanding the Recruitment, Selection	9	20	2	
Module 3	Explaining the concept of Training, Performance Appraisal	8	20	2	
Module 4	Explain the concept Wage and salary and attrition	10	15	2	
Module 5	Understanding new policies of Human Resource Management)	12	15	2	
Module 6	HRD in Public ,private and MNCs	15	15	1,2	
		60	100		

Detailed Syllabus:

Module 1- Definition of HRM, objective of HRM, Theory pf HRM, Function of HRM, role of HR manager, Scope of HRM
Module 2- Definition of recruitment, sources of recruitment, recruitment techniques used in different Industries, definition of selection, selection methods, techniques used in Govt. sectors
Module 3- Understanding the concept of training and development, techniques of training used in IT, Govt, MNCs, Concept of appraisal, Modern techniques of appraisal (BASRS,360 DEGREE, HRA etc.), Case study of using modern appraisal techniques in Industries
Module 4- Concept of wage and salary, calculation of salary, concept pf DA,DP, Fringe benefits, Concept of leave structure, Wage and salary administration, process, Concept of PF,BONUS,PENSION. Concept of attrition
Module 5- New HRM policies used in new trends. Case study and term paper.
Module 6- **Practical** HRD in Public ,private and MNCs term paper

Suggested Readings

1. Human Resource Management --- Gary Dessler
2. Human Resource Management--- P.Subba Rao
3. Human Resource Management --- Millokovich

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Course Name: Social Media management, Advertising & Marketing

Paper Code: GE4B-10

Mode: Blended/Offline **Credits: 3**

Course Objective: Social media management helps to capitalize on the surging popularity of social media platforms by creating and overseeing engagement, branding and marketing Campaigns.

Sl	Course Outcome	Mapped modules
1.	Understand Social Media	M1
2.	Understand Audience	M2
3.	Understand content	M3
4.	Understand Content Management	M3,M4
5.	Evaluation of study	M5
6.	Understanding social media advertising	M6
7.	Effects of Ad in social media	M6,M7
8.	Privacy policy for ad in social media	M8
9.	Concept of marketing in social media	M9
10.	Branding	M10

Module number	Content	Total Hour	% of question	Blooms level	Remark in any
1.	Social media: Concept	10	5	1	
2.	Audience : Definition and nature	4.5	5	2	
3.	Content creation	4.5	10	3	
4.	Content management: concept and application	6	10	2,3	
5.	Project on assignment-1 Project on Assignment 2	6	10	3	
6.	Social media advertising	4.5	5	2	
7.	AD in social media	5	10	2	
8.	How to put Ad in social media	4.5	10	3	
9.	Marketing in social media	4.5	10	3	
10.	Branding in social media	4.5	10	3	
11.	Capstone Project	6	15	3	
		54	100		

Detailed Syllabus:

Module 1: Social media: Concept; what is social media, Social media management (definition), Digital marketing: concept, scope and limitation,

Module 2: Audience: Definition and nature, Understanding social media pages, Choice of social media platforms.

Module 3: Content creation: What is content in social media, impact, role, influences, judging the impact of Post in various social media platform: anatomy and structure, Role of various posts in social media, nature of post (text, audio, and audio visual, visual?)

Module 4: Content management: concept and application How to create content (intro, body, Overview), Planning of storyboard, Judging the content, Make a deadline for the content (maintaining time frame,),scheduling the content, auditing the content, Social media content management.

Module 5: Project on assessing the content in various social media platforms (Facebook, Instagram)

Module 6: Social media advertising: Fundamentals of advertisement in social media, overview, Concept of Ad in social media, Paid ad in social media, Anatomy of Advertisement in social media platforms.

Module7: Advertisement in social media: Identify the nature of ad in social media, creating effective ad, writing copy for ad, working with brief.

Module 8: How to put Ad in social media: what is data, Policy of social media, norms of putting ad in social media, privacy policy, and data protection: various government regulations relating to data, Self-Regulation, Company Data policy

Module 9: Posting ad in social media, Anatomy of various ad in Face book, Instagram

Module 10: Brand: existence, purpose, identity, connection

Module 11: Capstone project

SUGGESTED READING:

1. Content Writing, Joseph Robinson
2. Writing for the Web; Lynda Felder
3. Handbook of Social Media Management; Value , Chain and Business Models in Changing Media Markets: Mike Friedrichsen, Wolfgang Mühl-Benninghaus
4. Strategic Social Media Management: Theory and Practice: Karen E. Sutherland
5. Social Media Marketing:Tracy L. Tuten, Michael R. Solomon
6. The New Community Rules: Marketing on the Social We:Tamar Weinberg

Course Code: GE4B-11
Course: E-Commerce & M-Commerce
Credit-3

Course Objective:

1. To understand the basic concepts and technologies used in the E-commerce and M-commerce.
2. To develop knowledge about challenges, security issues from business perspective in the E-commerce and M-commerce domain.
3. To familiarize students with HLML and CSS.

Sl	Course Outcome	Mapped modules
1	Remembering	M1, M2, M3, M4, M5, M6, M7
2	Understanding the course	M1, M2, M3, M4, M5, M6, M7
3	Applying the general problem	M3, M4, M6
4	Analyse the problems	M3, M4, M6
5	Evaluate the problems after analysing	
6	Create using the evaluation process	M7

Sl.	Topic/Module	Hour
1.	**Module 1:** E-Business Framework: Definition of E-Business, Origin of E-Business, History of the Internet, E-Business Opportunities for Businesses, Working of E-Business, E-Business Vs the Traditional Business Mechanism, Advanta ges of E-Business, Disadvantages of E-Business, Main Goals of E-Business.	5
2.	**Module 2**: Network Infrastructure for E-Commerce – I: Local Area Network (LAN), Ethernet: IEEE 802.3: Local Area Network (LAN) Protocols, Wide Area Network (WAN), The Internet, TCP/IP Reference Model, Domain Names, Hyper Text Markup Language (HTML), Simple Exercises in HTML.	5
3.	**Module 3**: E-Business: Requirements and Architecture: Requirements of E-Business, Functions of E-Business, E-Business Framework Architecture, I-way or Information Highway. Business Models: Evolution of Internet Business Models, Business Models in Practice, Business Model: The Six Components.	5
4.	**Module 4**: Security in Electronic Business: Intranet and Extranet Security: Threats and Protection, Protection Methods, Data and Message Security, Firewalls. Encryption: Cryptography, Encryption, Digital Signature, Virtual Private Network.	5

5.	**Module 5**: E-Marketing: Challenges of Traditional Marketing, Retailing in E-Business Space, Internet Marketing, Advertisement and Display on the Internet, E-Business for Service Industry. EDI, E-CRM and E-SCM: Electronic Data Interchange (EDI), E-CRM, E-SCM	5
6.	**Module 6:** Mobile Commerce: Overview of M-Commerce - Wireless Application Protocol (WAP), Generations of Mobile Wireless Technology, Components of Mobile Commerce, Networking Standards for Mobiles.	5
7.	**Module 7:** HTML: Creating web pages using HTML tags, elements, basic and advanced text formatting, multimedia components, designing web pages, document layout, Lists, Tables, Hyperlinks, Working with frames, forms, controls etc.	7
8.	**Module 8:** Introduction to Cascading Style Sheets: Concept of CSS, Creating Style Sheet, CSS Properties, CSS Styling(Background, Text Format, Controlling Fonts), Working with block elements and objects, Working with Lists and Tables, CSS Id and Class, Box Model(Introduction, Border properties, Padding Properties, Margin properties), CSS Advanced(Grouping, Dimension, Display, Positioning, Floating, Align, Pseudo class, Navigation Bar, Image Sprites, Attribute sector), CSS Color , Creating page Layout and Site Designs.	8

Suggested Readings:

1. Joseph, P.T. (2005). E-Commerce an Indian Perspective (2e), New Delhi Prentice-Hall of India
2. Gupta (2021). E-Commerce, Second Edition, Khanna Book Publishing Company
3. Gupta (2020). Information Security & Cyber Laws | AICTE Recommended, Khanna Book Publishing.
4. Kaspersky, (2008). The Cybercrime Ecosystem Whitepaper, Kaspersky Lab
5. O'Brien, J. (2004). Management Information Systems Managing Information Technology in The Business Enterprise, New Delhi Tata McGraw-Hill.
6. Rayport, J. F. & Jaworski, B. J. (2002). Introduction to E-Commerce, New York McGraw-Hill Irwin.
7. Stair, R. M. & Reynolds, G. W. (2001). Principles of Information Systems, 5e, Singapore Thomson Learning.
8. Debtoru Chatterjee: Cyber Crime And Its Prevention In Easy Steps, Khanna Book Publishing Company.
9. Powell Thomas: HTML & CSS: The Complete Reference: McGraw Hill Education India.
10. Elisabeth Robson and Eric Freeman: Head First HTML and CSS: Packt.

Subject: Digital Transformation and Industry 4.0	
Course Code: GE4B-12	**Maximum Marks: 100**
Teaching Scheme	**Examination Scheme**
Theory: 3	End Semester Exam: 70
Tutorial: 1	Attendance : 5
Practical: 0	Continuous Assessment: 25
Credit: 3	Practical Sessional internal continuous evaluation: NA
	Practical Sessional external examination: NA

Aim:	
Sl. No.	
1	To understand all elements of transformation efforts
2	To make students aware of current situation in various industry vertices.

Objective:	
Sl. No.	
1	To offer students an introduction to Industry 4.0 (or the Industrial Internet), its applications in the business world.
2	Understand the drivers and enablers of Industry 4.0
3	Understand the opportunities, challenges brought about by Industry 4.0 and how organisations and individuals should prepare to reap the benefits
4	To understand concepts of digital transformation and its application.

Pre-Requisite:	
Sl. No.	
1	Basic knowledge of computer and internet.
2	Should be aware of current situation in various industry vertices.

Contents			
Chapter	**Name of the Topic**	**Hours**	**Marks**
01	**Introduction to Industry 4.0** The Various Industrial Revolutions , Digitalisation and the Networked Economy , Drivers, Enablers, Compelling Forces and Challenges for Industry 4.0 , The Journey so far: Developments in USA, Europe, China and other countries , Comparison of Industry 4.0 Factory and Today's Factory , Trends of Industrial Big Data and Predictive Analytics for Smart Business Transformation	**8**	**10**
02	**Road to Industry 4.0**: Internet of Things (IoT) & Industrial Internet of Things (IIoT) & Internet of Services , Smart Manufacturing , Smart Devices and Products , Smart Logistics, Smart Cities , Predictive Analytics	**6**	**10**
03	**Related Disciplines, System, Technologies for enabling Industry 4.0:** Cyberphysical Systems , Robotic Automation and Collaborative Robots , Support System for Industry 4.0 , Mobile Computing , Related Disciplines , Cyber Security	**6**	**10**
04	**Role of data, information, knowledge and collaboration in future organizations :** Resource-based view of a firm , Data as a new resource for organizations , Harnessing and sharing knowledge in	**6**	**10**

	organizations , Cloud Computing Basics , Cloud Computing and Industry 4.0		
05	**Business issues in Industry 4.0 :** Opportunities and Challenges , Future of Works and Skills for Workers in the Industry 4.0 Era , Strategies for competing in an Industry 4.0 world	**5**	**10**
06	**Digital Transformation :** Introduction to Digital Transformation, Digital business transformation, Causes of disruption and transformation, Digital transformation myths and realities, Digital Transformation and customer experience, 4 pillars in customer experience transformation, Digital transformation in marketing	**7**	**10**
07	**Digital transformation across various industries :** Retail industry, Government and the public sector, Insurance industry, Healthcare, Banking: Royal Bank of Scotland case study, Fintech: Travelex case study, Public Sector: The MET office case study	**7**	**10**
	Sub Total:	**45**	**70**
	Internal Assessment Examination & Preparation of Semester Examination		**30**
	Total:	**45**	**100**

Name of Author	**Title of the Book**	**Edition/ISSN/ISBN**	**Name of the Publisher**
Alp Ustundag and EmreCevikcan	Industry 4.0: Managing The Digital Transformation		Springer
T.G. Sitharam	Building Future Ready India		Khanna Publishing
Reference Books:			
Dominik T. Matt, Vladimir Modrak, Helmut Zsifkovits	Industry 4.0 for SMEs: Challenges, Opportunities and Requirements		Springer

Course Name- Study of Textiles
Course Code- GE5B-01

Mode-Offline/ Blended

Course Objectives:

The course is designed to provide working knowledge of textile, the best utilization of available fabric resources, the awareness of its property, suitability for a particular use. The students will be able to understand and apply the acquired knowledge in their designs., and enhance aesthetic and functional value of textile material for fashion industry.

Course Outcomes (CO):

Sl	Course Outcome	Mapped modules
1	Remember & Understand different types of Textile materials available in the market and their uses.	M1, M2
2	Understand various kinds of fabrics, their structure, properties and the utility.	M2,
3	Understand Textile dyeing, printing and finishing techniques and	M3, M4.
4	Apply dyeing & Printing techniques on fabric samples to add aesthetic value to it	M4, M6
5	Remember & Understand various traditional hand embroidery techniques of India, and Apply this techniques for surface ornamentation of fabric samples	M5
6	Apply different embellishment techniques on different samples for value addition to it	M6

Module	Content	Total Hours	%age of questions	Covered CO	Blooms Level	Remarks (If any)
Module 1	Fiber Classification	4	12	1	1,2	
Module 2	Yarn & Fabric Formation	10	20	1	1,2	
Module 3	Fabric Finishing	5	20	2,3	1,2	
Module 4	Dyeing & Printing	6	20	3,4	2,3	
Module 5	Embroidery (Practical)	10	16	5	2,3	
Module 6	Surface Embellishment (Practical)	10	12	4, 6	2,3	
		45	100			

Detailed Syllabus:

ModuleI (4 Hours)
Introduction to Textiles and classification of fibres
According to source– Natural and Manmade.
Identification and proper ties of Textile fibres- Cotton, Silk, Wool ,Linen, Rayon(regenerated),Acetate ,Polyester, Nylonand Acrylic.

ModuleII (10 Hours)
Process of yarn for mation– handspinning, mechanical–ring spinning and modern-open end spinning.
Yarn classification–simple and novel tyyarns, characteristics, properties and uses of different yarn.
Method of fabric construction: Weaving-. Basic weaves-plain, satin, twill and their variations. Fancy weaves-pile, dobby, jacquard, extrawarp and weftfigure, leno, crepe and double cloth.
Other method of fabric construction- knitting, braiding, lace and felt. Non-woven fabrics and their applications.

ModuleIII (5Hours)

Finishes given to fabrics- definition, importance to the consumer, classification according to durability and function. singeing, scouring, bleaching, mercerization calendaring, sizing, de-sizing, brushing, carbonizing, crabbing, fulling, heat setting, shearing, weighting, stentering, napping.

Special Finishes and Treatments- water repellent and waterproof finishes, antistatic finish, anti-slip finish, flame retardant finishes, crease resistant finishes, durable press and shrink resistant finishes.

Module IV (6 Hours)

Dyeing-Stages of dyeing- fibrestage, yarn dyeing, fabric, cross, union dyeing and product stage. Method of dyeing-batch dyeing, reeldyeing, jig dyeing and package dyeing.

Printing- Direct roller printing, block printing, duplex printing, discharge printing, screenprinting-flat androtary, resist, batikandtie-dye.

ModuleV (Practical) (10 Hours)

Embroidery

Embroidery tools and techniques, embroidery threads and their classification, selection of threads, needle and cloth, tracing techniques, ironing and finishing of embroidered articles.

Basic Hand Embroidery. Basic and two variations of running stitch, backstitch, stemstitch, chainstitch, lazy daisy stitch, button hole stitch, feather stitch, herring bone stitch, knot stitch, satin stitch and cross stitch.

Traditional Embroidery- Origin, application & colours. Kantha, Chikan, Kasuti, Zardosi(Fourvariations), Kutchand Mirrorwork (Twovariations).

ModuleVI (Practical) (10Hours)

Surface Embellishment

Printing & Painting techniques:–originand applications –Block printing, Kalamkari and Patachitra.

Dyeingand weaving techniques:- Ikats, Patola, Bhandini, Laharia, Shibori, Brocade weave and Carpet weaving.

Special embellishment techniques: Batik-splash, t-janting, crackled, Tie and dye-lehariya, bandini, shibori, sunray and marbling, Block printing- vegetable block and wooden blocks, Applique(2methods), quilting(2 methods), Smocking-Chinese smocking(2 methods), honey comb, gathered with embroidery, Fabric painting(4methods), hand, Stencil- dabbing and spraying.

Suggested readings:

1. Fibertofabric.,B.T.Corbman,Mc.GrawHill
2.Fromfiberto fabrics,E.gale,Allman&SonsLtd.
3.FiberScienceandtheirselection.,Wingate,Prenticehall
4.Encyclopediaoftextiles.,EditorsofAmericanfabricmagazine.
5.Textiles.,Hollen.N.,Macmillanpublishingcompany.
6.Murphy.W.S.,TextileFinishing,AbhishekPublications,Chandigarh.
7.IndianTie-DyedFabrics,VolumeIVofHistoricTextilesofIndia.Merchant: CelunionShop
8.Traditional IndianTextiles., JohnGillow/NocholasBarnard, Thames& Hudson.
9.Surfacedesignforfabric,RichardMProctor/JenniferFLew,Universityof Washington Press.
10.Artof Embroidery: Historyofstyleandtechnique, LantoSynge,Woodridge
11.TheTimelessEmbroidery,HelenM,David&Charles.
12.Readers Digest, CompleteguidetoSewing,1993, Pleasantville-Nu GailL,SearchPressLtd.
13.Barbara. S,CreativeArt ofEmbroidery,Lundon,NumblyPub.groupLtd.
14.ShailajaN,TraditionalEmbroideriesof India.,MumbaiAPHPublishing.
15. B. Purushothama, Quality Management in Garment Industry

Course Name: Introduction to Hospitality Industry and Major Departments
Course Code: GE5B-02

Mode- Blended

Course Objective: The course is designed to provide overall concept of a hotel operation, the major operating departments, hierarchy, job profiling, functions and relation amongst the departments

Sl	Course Outcome	Mapped modules
1	Understand hospitality industry and relationship with tourism.	M1, M2
2	Understand basic front office operation.	M2, M1
3	Understand basic Housekeeping operation	M2, M3
4	Understand the importance of safety and hygiene.	M2.M3.M4
5	Understand the basic F &B service operation.	M1 ,M5
6	Understand & demonstrate menu and types of service	M5 ,M6

Module Number	Content	Total Hours	%age of questions	Blooms Level (if applicable)	Remarks (If any)
M 1	Introduction to hospitality	05	10	1,2	
M 2	Basic Front office operation	08	15	2,3	
M 3	Basic Housekeeping operation	09	15	2,3	
M 4	Safety and hygiene	05	20	2,3	
M 5	Basic F&B service operations	09	20	3,4	
M 6	Menu and types of service	09	20	3,4	
		45	100		

Detailed Syllabus:

Module 1 – Introduction to Hospitality Industry: Characteristics of Hospitality Industry and relation with Tourism, Types and Classification of Hotels, Departments in Hotels like Front Office, House Keeping, F&B Service and non-revenue earning departments and their co-ordination. (05 hours)

Module 2 – Basic Front Office Operations: Organizational chart of Front Office department with duties and responsibilities of staff, Types of guest room, basis of charging tariff, meal plans, type of guests, responsibility of Front Office department, Procedures in Front Office, Pre-registration, registration procedures, Bell-desk, Concierge, Cahier, Night Audit. Registration procedure, Role-play for check-in checkout procedures. Sanitization procedures. (8 Hours)

Module 3 –Basic Housekeeping Operations: Organizational chart of House Keeping department with duties and responsibilities of staff, responsibility of House Keeping department, Layout of Guest room, Guest supplies and amenities, Floor and Pantry, Room cleaning procedures, key control, lost and found procedures, forms formats and registers in Housekeeping, functions of House Keeping control desk. Role-play for complain handling and various services. (9 Hours)

Module 4 – Safety and Hygiene: Importance of Safety and Hygiene, Sanitization techniques for guest, hotel personnel, offices, Guest rooms and Public areas, Liaison with Public health department, Accidents, Fire, and security. Concept of First aid and artificial respiration (05 Hours)

Module 5 – Basic F&B Service Operations: Organizational chart of F&B Service department with duties and responsibilities of staff, responsibility of F&B Service department, Attributes of personnel, Equipment and Service ware uses care and maintenance, Types and Layout of F&B Service areas, basic menu knowledge and types of service. (9 Hours)

Module 6 –Menu and types of Service: Basic concept of Menu, restaurant and Coffee Shop Layout, the concept of stations, numbering the tables and covers at a table, reservation systems in restaurants, records & registers maintained by a Restaurant, rules to be observed while laying and waiting at the table, Dos & don'ts of waiting staff in F&B service operations, organizing the staff for service. (9 Hours)

Suggested Readings:

- Development of Hotels and Resorts, S.G. Krishna Murthy, Khanna Publications.
- Hotel Housekeeping, Sudhir Andrews, Tata McGraw Hill
- The Professional Housekeeper, Tucker Schneider, VNR
- Professional Management of Housekeeping Operations, Martin Jones, Wiley
- House Keeping Management for Hotels, Rosemary Hurst, Heinemann
- Front office operations by Colin Dix &Chirs Baird
- Hotel Front office management by James Bardi
- Managing front office operations by Kasavana& Brooks
- Food & Beverage Service -Lillicrap& Cousins
- Modern Restaurant Service -John Fuller
- Food & Beverage Service Management-Brian Varghese
- Introduction F& B Service-Brown, Heppner & Deegan
- Professional Food & Beverage Service Management -Brian Varghese

Course: Health Education and Communication

Course Code: GE5B-03

Mode- Offline/ Blended

Course Objective The course is designed to provide basic knowledge about the health and health communication. The students will be able to use information, communication and education across media for the public towards ensuring equitable access to health for both prevention and cure.

Sl	Course Outcome	Mapped modules
1	Explain the concept of health and the knowledge of health education in society.	M1
2	Apply the modern technology in health care sectors.	M2
3	Describe the different model of communication.	M3
4	Develop the communications to the different field of society.	M4
5	Able to use the computer as a tool in health care.	M5
6	Understand how to aware the people about the health.	M6

Module Number	Content	Total Hours	%age of questions	Blooms Level(if applicable)	Remarks (If any)
M 1	Concept Of Health And Health Education	8	20	L1, L2	
M 2	Health Education & Artificial Intelligence	6	10	L1, L2	
M 3	Heath Communication	8	10	L1, L2	
M 4	Mass communication and role of media	8	10	L1, L2	
M 5	Tools used for communication	7	30	L1, L2	LAB
M 6	Presentation on concept of health and health education	8	20	L1, L2	LAB
		45	100		

Detailed Syllabus:

Module 1- Concept of Health and Health Education: 8h

Definition of physical health, mental health, social health, spiritual health determinants of health, indicatory of health, concept of disease, natural history of diseases, the disease agents, concept of prevention of diseases.

Health Education: Principles & Objectives, Levels of Health Education, Educational Methods, Evaluation & practice of Health Education in India.

Family planning: Demography and family planning: Demography cycle, fertility, family planning, contraceptive methods, behavioral methods, natural family planning methods, chemical methods, mechanical methods, hormonal contraceptives, population problem of India.

Module 2-Health Education & Artificial Intelligence: 6h

Changes in the workforce, Robots, assisting the human experts or completely robotic diagnosis, Medical training: to train paramedical students, AI can play a big role, Virtual health assistants, advanced health research, Clinical and administrative task handling.

Module 3-Heath Communication: 8h

Basic Concept & Principles of Communication, Definition, Purpose, Types of Communication, Communication Process, Directions of Communication: Upward, Downward, Lateral, Factors influencing Communication, Barriers of Effective communication, How to overcome the Barriers Models of communication: Aristotle Model, Shannon and Weaver model, Schramm Model, Laegans Model, Fano Model, Literer's Model, Westly Maclean's Model.

Module 4- Mass Communication and Role of Media: 8h

Mass communication & Role of Media in health education, Information Communication Technologies (ICT) in health care and awareness. (Telemedicine & e-health, community radio) Future trends in information and communications systems:

Module 5: Tools Used for Communication 7h

Introduction to PC Operating System and MS office package - Windows 10/Ubuntu, MS Office 2016 / Office360 (MS Word, MS Excel, MS PowerPoint, MS Outlook, Internet and Email)

Module 6: Presentation on Concept of Health and Health Education 8h

Reference Books:

1.Health Education – A new approach – L. Ramachandran & T. Dharmalingan

2.Health Communication in the 21st Century, By Kevin B. Wright, Lisa Sparks, H. Dan O'Hair, Blackwell publishing limited, 2013,

3.Health Communication: From Theory to Practice, By Renata Schiavo, Published by Jossey Bash.

4.Health Communication, R.D. Karma Published by Mohit Publications 2008.

5.Counseling Skills for Health Care Professionals, 1st Edition, Rajinikanth AM, Jaypee Brothers, 20

Paper: Hospital Support Services
Paper Code: GE5B-04
Credit: 3

Course Objectives:

1. To gain an overview of general concepts of a hospital
2. To demonstrate out patient service concept
3. To demonstrate in patient service concept
4. To demonstrate specialty service concept
5. To demonstrate super specialty service concept
6. To demonstrate support service concept
7. To demonstrate utility service concept

Course Outcome (CO):

SLNO.	Course Outcome	Mapped Modules
1	Ability to demonstrate the concept of a hospital	Module I
2	Ability to demonstrate the concept of outpatient service	Module II
3	Ability to demonstrate the concept of in patient service	Module III
4	Ability to demonstrate the concept of specialty service	Module IV
5	Ability to demonstrate the concept of super specialty service	Module V
6	Ability to demonstrate the concept of super service	Module VI
7	Ability to demonstrate the concept of utility service	Module VII

MODULE I: OVERVIEW - GENERAL CONCEPTS OF HOSPITAL[6L]

Disaster management, Hospital operations management, role and decisions, Difference of hospital operations from other service and manufacturing organizations.

MODULE II: OUT PATIENT SERVICES[6L]

Overview of the department, day care, accident and emergency services, physical medicine andrehabilitation, occupational therapy unit, physiotherapy department

MODULE III: IN PATIENT SERVICES[5L]

Nursing service and ward management - critical care services – ICU, CCU, NICU, medical services, surgical services, operation theater, nuclear medicine, burn unit, nursing services and administration

MODULE IV: SPECIALTY SERVICES[6L]

Pediatrics, OBG & GYN, ENT, Ophthalmology, Orthopedic, Psychiatry, Anesthesia, Dental

MODULE V: SUPER-SPECIALTY SERVICES[6L]

Cardiology, Thoracic Surgery, Neurology, Neurosurgery, Nephrology- Dialysis Unit, Transplantation Services

MODULE VI: SUPPORT SERVICES[8L]

Diagnostic-Radiology & Imaging Services, Hospital Laboratory etc. Blood Bank & Transfusion, Services, Ambulance Services, Pharmacy, CSSD, Oxygen Manifold/ Concentrator, Dietary Service, Hospital Laundry and Linen, Medical Social Worker, Marketing and Public Relations, Finance and Administrative Departments Outsourcing

MODULE VII: UTILITY SERVICES[8L]

Housekeeping, Hospital Engineering and Maintenance, Biomedical Department, Central Stores and Purchase Department, Medical Records-confidentiality of records, reception, enquiry, registration and admission, central billing and accounts, Cafeteria/canteen, Mortuary,

Suggested Readings:

1. Hospital facilities planning & management, Gd Kunders—TMH
2. Principles of Hospital Administration &Planning, BM Shakharkar—JAYPEE
3. Hospital administration, DC Joshi & Mamta Joshi—JAYPEE
4. Essentials for Hospital support services and physical Infrastructure, Madhuri Sharma—JAYPEE
5. Hospitals and Nursing homes planning, organizations and management, Syed AminTabish—JAYPEE
6.

ModuleNo.	Content	Total Hours	%age of questions	Covered CO	Covered PO	Blooms Level(if applicable)	Remarks(if any)
MODULE I	GENERAL CONCEPTS	6	15	1	7		
MODULEII	INPATIENTSERVICES	6	10	2	7		
MODULEIII	OUTPATIENTSERVICES	5	10	3	7		
MODULEIV	SPECIALITYSERVICES	6	10	4	7		
MODULEV	SUPERSPECIALTY SERVICES	6	10	5	7		

MODULEVI	SUPPORTSERVICES	8	20	6	7		
MODULEVII	UTILITY SERVICES	8	20	7	7		

Course: Introduction to 3D printing Technology	
Course Code: GE5B-06	**Semester: III**
	Maximum Marks: 100
Teaching Scheme	**Examination Scheme**
Theory: 3	End semester Exam: 70
Tutorial: 0	Attendance: 5
Practical: 0	Continuous Assessment: 25
Credit: 3	Practical/Seasonal internal continuous evaluation: 0
	Practical/Seasonal external examination: 0

Sl. No.	**Course Objective**	
1	Introduce students to the basic concepts and principles of 3D printing technology.	
2	Explore the materials used in 3D printing and the techniques to achieve optimal prints.	
3	Explore the diverse applications of 3D printing across various industries and emerging innovations.	
4	Apply knowledge gained to conceptualize, design, and print a project using 3D printing technology.	
	Course Outcomes	**Mapped module/Unit**
CO 1	Students will demonstrate an understanding of the fundamental principles of additive manufacturing and the various processes involved, including FDM, SLA, and SLS. They will be able to explain how each process works, identify suitable applications for different technologies, and compare their strengths and limitations.	U1
CO 2	Students will be able to apply design principles specific to additive manufacturing, such as designing for manufacturability, optimizing geometries to minimize supports, and ensuring structural integrity and dimensional accuracy. They will demonstrate proficiency in using CAD	U2

	software to create models suitable for 3D printing.	
CO 3	Students will analyze case studies and real-world applications of 3D printing technology across various industries, including automotive, aerospace, healthcare, and consumer goods. They will evaluate the impact of 3D printing on product development cycles, supply chain management, and customization capabilities within these sectors.	U3
CO 4	Students will critically discuss ethical considerations related to 3D printing, such as intellectual property rights, privacy concerns in bioprinting, and the societal implications of widespread adoption. They will also examine sustainability aspects, comparing the environmental footprint of additive manufacturing with traditional manufacturing methods and exploring strategies for reducing waste and recycling materials.	U4

Unit	Total Hours	% of Questions	Bloom's Taxonomy	Remarks, if any
THEORY				
U1	**10**	**30**	**1,2**	
U2	**10**	**25**	**1,2**	
U3	**10**	**25**	**1,2,3**	
U4	**15**	**20**	**1,2,3**	
	45	**100%**		

Course Code:	**GE5B-06**	
Course:	**Introduction to 3D printing Technology**	Credits: 3.0
Contents		
Chapter	**Name of the Topic**	**Hours**

Unit-I	**<u>Fundamentals of 3D Printing:</u>**
	• **Overview of Additive Manufacturing**
	  • Definition and principles of additive manufacturing.
	  • Historical development and key milestones in 3D printing technology.
	• **Types of 3D Printing Processes**
	  • Classification and comparison of different additive manufacturing techniques (e.g., FDM, SLA, SLS).
	  • Principles of each technique and their industrial applications.
	• **Materials Used in 3D Printing**
	  • Types of materials used in 3D printing (e.g., polymers, metals,
		15

	ceramics). • Properties and considerations for material selection in different applications. • **CAD and Digital Modeling for 3D Printing** • Basics of Computer-Aided Design (CAD) software. • Design considerations specific to additive manufacturing (e.g., supports, resolution).	
Unit-II	**Design Considerations and Optimization for 3D Printing:** • **Design for Additive Manufacturing (DfAM)** • Principles of DfAM: optimizing designs for specific 3D printing processes. • Geometric considerations, such as overhangs, support structures, and tolerances. • **Software Tools and Simulation** • Overview of slicing software and its role in preparing models for printing. • Simulation tools for predicting print outcomes and optimizing designs. • **Quality Control and Inspection** • Methods for evaluating print quality (e.g., surface finish, dimensional accuracy). • Post-processing techniques and their impact on final part quality.	**10**
Unit-III	**Applications and Industry Trends:** • **Industrial Applications** • Case studies of 3D printing in automotive, aerospace, healthcare, and consumer goods. • Impact on supply chain management, prototyping, and customization. • **Advanced Applications** • Bioprinting and medical applications. • Use of 3D printing in architecture, art, and fashion. • **Future Trends and Challenges** • Emerging materials and technologies in additive manufacturing. • Economic and regulatory considerations in the adoption of 3D printing technologies.	**10**

Unit-IV	**Ethics, Sustainability, and Future Directions:**
	• **Ethical Considerations**
	  • Intellectual property issues and digital piracy.
	  • Ethical implications of bioprinting and personalized medicine.
	• **Sustainability**
	  • Environmental impact of 3D printing compared to traditional manufacturing methods.
	  • Recycling and waste management in additive manufacturing.
	• **Future Directions**
	  • Predictions for the future of 3D printing technology.
	  • Challenges and opportunities in advancing additive manufacturing techniques.
		10

	Total:	**45**

List of Books

Sl. No.	Title of the Book	Name of Author
1	3D Printing & Design	Sabrie Soloman
2	3D Bioprinting Revolution	Sabrie Soloman

Subject: Blockchain Technology			
Course Code: GE 5B-05			
	Maximum Marks: 100		
Teaching Scheme	**Examination Scheme**		
Theory: 2hours per week	**End Semester Exam**: 70		
Tutorial:1 hours per week	**Teacher's Assessment**: 5		
Practical:	**Internal Assessment**: 25		
Credit: 3			
Aim:			
Sl. No.			
1	To appreciate the functionality of Blockchain technologies		
Objective:			
Sl. No.			
1	To be able to apply blockchain in traditional business contexts		
Pre-Requisite:			
Sl. No.			
1	Basic knowledge of Economics		
Contents		**Hrs./week**	
Chapter	**Name of the Topic**	**Hours**	**Marks**
01 Understanding the technology	• How it began and the blockchain landscape: sizeof the market, geographies and major players. • Not one technology but many: key businessprotocols and how they work. • Design principles: security, privacy, preservation ofrights. • Business application framework: challenges andsolutions in integration and implementation.	9	15
02 Applying blockchain in traditional business contexts	• To disrupt or sustain: How is blockchain being applied to drive value for business across sectors,enterprises and business models? • When is blockchain the answer? Ideal use casesand criteria: blockchain vs. traditional distributed databases.	9	15

	• Action principles for managing blockchain for business value. • Creating an action plan for your business: initial thoughts and faculty input.		
03 Blockchain and radical business innovation	• How can blockchain services, platforms and infrastructures innovate distributed business models? • Analysis of case studies, including crypto-tokens, crowdfunded ICO startups, smart contracts and eco-system resource exchanges, to inform innovation in your business or work.	9	15
04 Risks, return and regulation	• The business case for a blockchain application: learn how to identify and manage risks, problems and challenges and how to assess likely business value. • Organisational implementation challenges and emerging solutions: build stakeholder buy-in and senior leadership support. • Reviewing shared governance models and understanding the regulatory environment.	9	15
05 The future of blockchain – developments, directions and challenges	• Where is it all going? Expert analysis of emerging core uses and new areas. • What are the risks, challenges and solutions? • Action plan session: Designing a blockchain solution and building a paper-prototype.	9	10
	Sub Total:	45	70
	Internal Assessment Examination & Preparation of Semester Examination		30
	Total:		100

List of BooksText Books:

Name of Author	Title of the Book	Edition/ISSN/ISBN	Name of the Publisher

Anshul Kaushik	Block Chain & Crypto Currencies, Second Edition | AICTE Recommended	2021/ 978-9386173720	Khanna Publishing House
Kartik Hegadekatti	Fundamentals of Blockchain Technology	2021/ 978-9386173720	Khanna Publishing House
Tailor Jacobs	Blockchain: A Step-by-step Guide for Beginners to Implementing Blockchain Technology and Leveraging BlockchainProgramming	2017 / 978-1548009595	Createspace Independent Pub
Reference Books:			
David Furlonger; Christophe Uzureau	The Real Business ofBlockchain	2019/ 978-1633698048	Harvard Business Review Press

Course: Advances in Medical Technologies	
Course Code: GE5B-07	**Semester: III**
	Maximum Marks: 100
Teaching Scheme	**Examination Scheme**
Theory: 3	End semester Exam: 70
Tutorial: 0	Attendance: 5
Practical: 0	Continuous Assessment: 25
Credit: 3	Practical/Sessional internal continuous evaluation: 0
	Practical/Sessional external examination: 0

Sl. No.	Course Objective
1	This course aims to provide students with a comprehensive understanding of various biochemical techniques and their applications particularly in clinical diagnosis.
2	The focus will be on chromatographic, electrophoretic, and centrifugation techniques as well as radioisotopes and immunoassays.
3	By the end of the course, students should be able to understand the principles, instrumentation and clinical applications of these methods.

	Course Outcomes	Mapped module/Unit
CO 1	Understand and explain the principles of chromatography.	U1
CO 2	To discuss the comprehend electrophoretic techniques.	U2
CO 3	Understand the fundamentals of principles of centrifugation and describe the instrumentation and applications in clinical diagnostics.	U3
CO 4	Understand the principles and applications of radioisotopes in clinical biochemistry.	U4
CO5	Comprehend the principles of various immunoassays application in clinical diagnostic procedures.	U5
CO6	Understand basic concepts of DNA and protein sequencing and grasp the principles of next generation sequencing, proteomics and	U6

	MALDI-TOF.	

Unit	Total Hours	% of Questions	Bloom's Taxonomy	Remarks, if any
THEORY				
U1	10	20	1,2	
U2	10	20	1,2	
U3	10	20	1,2,3	
U4	5	15	1,2	
U5	5	15	1,2	
U6	5	10	1,2	
	45	100%		

Course Code:	**GE5B-07**	
Course:	**Advances in Medical Technologies**	Credits: 3.0
Contents		
Chapter	**Name of the Topic**	**Hours**
Unit-I	Chromatography, its principle, types and applications. Paper Chromatography, Thin layer Chromatography, HPLC, Gas liquid chromatography, Ion exchange chromatography and their application in clinical diagnosis.	**10**
Unit-II	Basic Principle of electrophoresis, Paper electrophoresis, Gel electrophoresis, PAGE, SDS PAGE, Agarose gel electrophoresis, buffer systems in electrophoresis. Electrophoresis of proteins and nucleic acids, hemoglobin Applications of Electrophoresis in clinical diagnosis.	**10**
Unit-III	Centrifugation – Basic Principle of Centrifugation, Instrumentation of Ultracentrifuge (Preparative, Analytical), Factors affecting Sedimentation velocity, Standard Sedimentation Coefficient, Rate-Zonal centrifugation, sedimentation equilibrium Centrifugation.	**10**
Unit-IV	Radioisotopes, Radioactivity, instruments for radioactivity measurement, X-Ray Crystallography – X-ray diffraction, applications of radioisotopes in clinical biochemistry	**5**

Unit-V	Immunoassay: ELISA, RIA, FIA, FACS,western blotting and their applications in clinical diagnosis	**5**
Unit –VI	Brief idea about DNA sequencing, protein sequencing, next generation techniques, proteomics, maldi-tofi applications in clinical diagnosis.	**5**
	Total:	**45**

List of Books

Sl. No.	Title of the Book	Name of Author
1	Fundamentals of Clinical Chemistry,6th edition, Elsevier Publications	Teitz,(2007)
2	Clinical Diagnosis and Management by Laboratory Methods, (2011),22nd edition, Elsevier	Henry's
3	Practical Biochemistry,2nd edition	Wilson & Walker
4	Principles of Biochemistry,6th edition	Lehninger (2013)

Course: Fundamentals of IOT	
Course Code: GE5B-08	**Semester: III**
	Maximum Marks: 100
Teaching Scheme	**Examination Scheme**
Theory: 3	End semester Exam: 70
Tutorial: 0	Attendance: 5
Practical: 0	Continuous Assessment: 25
Credit: 3	Practical/Sessional internal continuous evaluation: 0
	Practical/Sessional external examination: 0

Sl. No.	Course Objective
1	To understand key concepts of IOT.
2	To understand various concepts of sensors and actuators
3	To understand various concepts of interfacing
4	To understand various concepts of ESP8266
5	To Understand various concepts of protocols

	Course Outcomes	Mapped module/Unit
CO 1	Students should grasp the fundamental concepts of the Internet of Things (IoT), including its definition, components, architecture, and applications	U1
CO 2	Gain knowledge of the technologies that underpin IoT systems, such as sensors, actuators, communication protocols (like MQTT, CoAP), and IoT platforms.	U2
CO	Comprehend the ecosystem surrounding IoT, including cloud	U3

3	computing, edge computing, data analytics, and cybersecurity considerations specific to IoT.	
CO 4	Acquire skills in designing and developing IoT systems, covering aspects like device integration, data management, and application development for IoT.	U4
CO 5	Learn about deploying IoT solutions in real-world scenarios, managing IoT devices and networks, scalability considerations, and maintenance	U5

Learning Outcome/Skills:

The students will be able to learn, acquire and apply the fundamentals of IOT, Different Interfacing System,

Unit	Total Hours	% of Questions	Bloom's Taxonomy	Remarks, if any
THEORY				
U1	9	20	1,2	NA
U2	9	20	1,2	NA
U3	9	20	1,2,3	NA
U4	9	20	1,2,3	NA
U5	8	20	1,2,3	NA
U6	1			
	45	100%		

Course Code:	GE5B-08	
Course:	**Fundamental Of IOT**	Credits: 3.0
Contents		
Chapter	**Name of the Topic**	**Hours**
Unit-I	**Introduction To IOT:** • Understanding IoT fundamentals • IOT Architecture and protocols • Various Platforms for IoT • Real time Examples of IoT • Overview of IoT components and IoT Communication Technologies • Challenges in IOT	**9**
Unit-II	***Introduction To Arduino Programming:*** • ARDUINO UNO board Block diagram • Sketch Structure • Data types & Built in Constants • Operators: Arithmetic, Bitwise, Compound, Comparison, and Boolean • Control statements and Loops • Functions and library functions • User defined functions • Library functions: I/O Functions: digitalRead, digitalWrite, pinMode, analogRead, analogWrite, analogReference. Char functions: isAlpha, isAlphaNumeric, isDigit, isHexadecimalDigit, isSpace, isWhitespace, isUpperCase, isLowerCase. Math Functions: abs, constrain, max, min, pow, sqrt • Serial Communication Functions: Serial, available, begin, end, print, println, write, read, readBytes, readString. Chapter Ending Project: LED Blinking using Arduino (Using Virtual Simulation)	**9**
Unit-III	**Introduction To IOT Devices(Using Virtual Platform):** • Overview of Sensors and Actuators • ***Introduction To Different Sensors (Working, PIN Diagram):*** Temperature and Humidity, PIR, Light ,Ultrasonic Sensor • ***Introduction To Different Motors(Working, PIN Diagram):*** Interfacing of Servo, DC Motors • Interfacing of Actuators and Sensors with Arduino	**9**
Unit-IV	**Introduction To ESP8266 Board (Using Virtual Platform):** Introduction Pin out Interfacing of Servo, Ultrasonic Sensor, LDR Sensors	**9**

Unit-V	**Different Protocols and Cloud Platform:** ***Introduction To Protocols:*** • MQTT • CoAP • XMPP ***Introduction To Cloud*** • Introduction To Cloud Computing • Introduction To SAAS, PAAS, IAAS • Introduction to Thing speak	**8**
Unit -VI	**Project:** Home Automation (Virtual Mode)	**1**
	Total:	**45**

List of Books

Sl. No.	Title of the Book	Name of Author
1	Internet of Things | AICTE Recommended	Jeeva Jose, Khanna Publishing House
2	Internet of Things with Arduino Cookbook	Marco Schwartz Packt Publishing Ltd.
3	Internet of Things: A Hands On Approach A	Arshdeep Bahga and Vijay Madisetti Universities Press (India) Private Limited

Course: GE5B-09	
Course Code: GE5B-09	**Semester: III**
	Maximum Marks: 100
Teaching Scheme	**Examination Scheme**
Theory: 3	End semester Exam: 70
Tutorial: 0	Attendance: 5
Practical: 0	Continuous Assessment: 25
Credit: 3	Practical/Seasonal internal continuous evaluation: 0
	Practical/Seasonal external examination: 0

Sl. No.	**Course Objective**
1	To familiarize students with medical terminology, including prefixes, suffixes, and abbreviations.
2	To provide foundational knowledge of anatomy and physiology relevant to medical transcription.
3	To train students in interpreting and preparing medical reports, including outpatient and inpatient reports.
4	To introduce students to medical instruments, surgical procedures, and related terminology.
5	To train students in essential computer skills for medical transcription, including data entry, text editing, and internet browsing.
6	To develop advanced transcription skills, including transcribing authentic physician dictations and complex medical documents.
7	To educate students on legal aspects and ethical considerations in medical transcription.

	Course Outcomes	**Mapped module/Unit**
CO 1	Students will be able to accurately identify and interpret medical terms, enhancing their ability to transcribe medical documents effectively.	U1

CO 2	Students will gain a comprehensive understanding of anatomical structures and physiological processes, enabling them to transcribe medical reports with anatomical accuracy.	U2
CO 3	Students will develop skills in accurately transcribing and interpreting medical findings and reports, enhancing their proficiency in medical transcription.	U3
CO 4	Students will be proficient in transcribing surgical procedures, understanding surgical terminology, and accurately documenting operative reports	U4
CO5	Students will acquire proficiency in using computer software and tools for efficient medical transcription, enhancing productivity and accuracy.	U5
CO6	Students will demonstrate mastery in transcribing various medical documents accurately, applying advanced transcription techniques and adhering to industry standards.	U6
CO7	Students will understand legal responsibilities, ethical standards, and confidentiality requirements in medical transcription practice. Students will demonstrate proficiency in English language skills necessary for accurate transcription and effective communication in medical settings	U7

Unit	Total Hours	% of Questions	Bloom's Taxonomy	Remarks, if any
THEORY				
U1	5	10	1,2	NA
U2	10	20	1,2,3	NA
U3	5	10	1,2,	NA
U4	5	10	1,2,	NA
U5	5	20	1,2,	NA
U6	10	10	1,2	NA
U7	5	10	1,2	NA
		100		

Course Code:	**GE5B-09**	
Course:	**Basics of Prescription reading and medical transcription**	Credits: 3.0
Contents		

Chapter	Name of the Topic	Hours
Unit-I	Medical words, Words Dynamics, Body Dynamics, Medical specialties & specialists, Medical Abbreviations, Prefixes, Suffixes, Surface Marking, Positional Orientation	**5**
Unit-II	Anatomy & Physiology - Basic Ideas (a) Skin. (b) Respiratory System. (c) Digestive System. (d) Cardio Vascular System & Angiology. (e) Reproductive System & Sex related disorders. (f) Urinary System. (g) Nervous System. (h) Certain common Medical Disorders. (i) E.N.T. (j) Ophthalmology. (k) Dentistry. (l) Musculo-skeletal System, including Osteology, Mycology, Orthopaedics & Fractures. (m) Endocrinology. (n) Immunology & Genetics. (o) Oncology. (p) Psychiatry. (q) Blood & Blood forming organs. (r) Surgical procedures & operations, Instruments, Accessories, Splints, Prosthetics. (s) Cosmetology. (t) Tropical diseases outline.Pharmacology,Drug Terminology,Dosages & schedules,Terms, symbols, spelling, packaging,Classification (Brand, generic, and trade name)	**10**
Unit-III	Report types,Outpatient Reports,Inpatient Reports,Study , Interpretation & preparing report of various Pathological, radiological findings.Investigations & nomenclatures,parameters used in Electro-cardiology, Echocardiology, Pulmonology & Radiology.	**5**
Unit-IV	Medical Instruments & equipment,Surgical Instruments,Suture and Dressings,All types of surgery-related terms listing, dictation, and sample reports,Surgery Compendium includes General, Breast, Digestive, Intra-abdominal, colon, bowel, anal, and many other surgery-related term listing and sample reports.Surgical procedures & operations, Instruments, Accessories, Splints, Prosthetic	**5**
Unit-V	Computer : Practice on data entry & data processing and Text editing. Logging, Internet Browsing. Downloading – Text. Computer Basics : Computer Software., Input / Out put Devices. MS Office - MS Word. Browsing, Surfing., E –mail.	**5**

Unit -VI	Module 6 Medical Transcription : Practice on Transcribing of authentic physician's dictation, including office chart notes in various formats, letters, initial office evaluations, history & physicals, consultations, operative reports and discharge summaries. Medical Transcription : Use, importance & application of Medical Transcription. New paradigm of Medical treatment using Computer, Internet, Website etc. Familiarization with AAMT Book of Style Guidelines. : Beginning, Intermediate & Advanced Medical Transcription • Installing Your Wav Pedal – Express Scribe • Installing the Various Dictation Modules • Beginning Transcription • Procedures for Transcribing • Most Common Errors of New Transcriptionists • The Healthcare Team and the Operative Report • Prepping and Draping Methods • Surgical Positions • Types of Anesthesia • Wound and Wound Closures • Procedures for Transcribing • Most Common Errors of New Transcriptionists • Dealing with Difficult Dictators • Expander Software • Learning How to Use Expander Software (E.g. Instant Text) • Windows Shortcuts and Abbreviations • Shortcut Rules for Long Words • Shortcut Rules for Short Words • Shortcut Rules for Phrases • Shortcut Rules for Long Phrases • Shortcut Rules for Prefixes • Procedures for Transcribing Advanced Files	**10**
Unit -VII	Legal Aspects and Ethical Considerations for Transcriptionists, **English Language for Medical Transcriptionists**	**5**
	TOTAL	**45**

List of Books

Sl. No.	Title of the Book	Name of Author
1	**Medical Transcription**	Blanche Ettinger (Author), Alice G. Ettinger (Author)
2	**Essentials of Medical Transcription: A Modular Approach**	Cynthia Destafano (Author), Fran M. Federman (Author

Course: Fundamental of Bioinformatics	
Course Code: GE5B-10	**Semester: III**
	Maximum Marks: 100
Teaching Scheme	**Examination Scheme**
Theory: 3	End semester Exam: 70
Tutorial: 0	Attendance: 5
Practical: 0	Continuous Assessment: 25
Credit: 3	Practical/Sessional internal continuous evaluation: 0
	Practical/Sessional external examination: 0

Sl. No.	Course Objective
1	Provide a strong foundation in bioinformatics principles,tools,and techniques.
2	Develop skills for analyzing large scale molecular biology data using bioinformatics approaches.
3	Teach students to effectively use biological databases for research and practical application
4	Familiarize students with key bioinformatics tools and software for data analysis and visualization.
5	Prepare students to engage in bioinformatics research, including data generation,storage,retrieval and analysis.

	Course Outcomes	Mapped module/Unit
CO 1	Demonstrate a comprehensive understanding of bioinformatics and its relationship with molecular biology.	U1
CO 2	Utilize key bioinformatics tools and software for sequence analysis and molecular biology.	U2
CO 3	Efficiently navigate and extract relevant information from major biological databases and analyze large-scale molecular biology data and interpret results using bioinformatics.	U3

CO 4	Techniques for storing biological data, including flat files, relational databases and project object-oriented databases.	U4
CO 5	Understanding how gene expression is regulated and how it varies among different stages and comparing the mechanisms of gene expression.	U5
CO 6	Understanding how genetic differences contribute to variations in clinical outcomes and disease suspectibility.	U6

Unit	Total Hours	% of Questions	Bloom's Taxonomy	Remarks, if any
THEORY				
U1	10	20	1,2	NA
U2	10	20	1,2,3	NA
U3	10	20	1,2,	NA
U4	5	15	1,2,	NA
U5	5	15	1,2,	NA
U6	5	10	1,2	NA
		100%		

Course Code:	GE5B-10	
Course:	Fundamental of Bioinformatics	Credits: 3.0
Contents		
Chapter	Name of the Topic	Hours
Unit-I	What is Bioinformatics and its relation with molecular biology Examples of related tools(FASTA, BLAST, BLAT, RASMOL), databases(GENBANK, PubMed, PDB) and software(RASMOL,Ligand Explorer), Data generation; Generation of large scale molecular biology data. Applications of Bioinformatics.	10
Unit-II	Biological Database and its Types ,Introduction to data types and Source. Population and sample, Classification and Presentation of Data. Quality of data, private and public data sources	10
Unit-III	General Introduction of Biological Databases; Nucleic acid databases (NCBI, DDBJ, and EMBL). Protein databases (Primary, Composite, and Secondary).	10

Unit-IV	Data storage and retrieval and Interoperability, Flat files, relational, object oriented databases and controlled vocabularies. File Format (Genbank, DDBJ, FASTA, PDB, SwissProt)	**5**
Unit-V	Gene Expression and Representation of patterns and relationship,General introduction to Gene expression in prokaryotes and eukaryotes, transcription factors binding sites.	**5**
Unit -VI	SNP, EST, STS.Introduction to Regular Expression, Hierarchies, and Graphical models (including Marcov chain and Bayes notes).Genetic variability and connections to clinical data.	**5**
	Total:	**45**

List of Books

Sl. No.	Title of the Book	Name of Author
1	Bioinformatics - A Practical Guide to the analysis of Genes and Proteins	Andreas Baxevanis & B.F. Francis Ouellette
2	BIOINFORMATICS: PRINCIPLES AND APPLICATIONS	Zhumur Ghosh (Author), Bibekanand Mallick (Author)
3	Foundations of Bioinformatics	Manuj Darbari, Khanna Book Publishing

Indian Constituency
Code: GE6B-01
Contact: 2L+1T
Credits: 3

Course Outcomes:

Sl. No.	Course Outcome	Mapped modules
1.	Understand the emergence and evolution of Indian Constitution	Module1
2.	Understand the structure and composition of Indian Constitution	Module2, Module3, Module 4
3.	Understand the Election and role of Election Commission of India	Module 5

Module No.	Content	Total Hour	%age of questions	Blooms level (if applicable)	Remarks (if any)
Module 1	Introduction	7	20		
Module 2	Union Government and its Administration	10	20		
Module 3	State Government and its Administration Governor	10	20		
Module 4	Local Administration District's Administration head	12	20		
Module 5	Election Commission	6	20		
		45	100		

Unit	Content	Hrs/Unit
1	**Introduction:** 'Constitution' meaning of the term, Indian Constitution: Sources and constitutional history, Features: Citizenship, Preamble, Fundamental Rights and Duties, Directive Principles of State Policy	7
2	**Union Government and its Administration:** Structure of the Indian Union: Federalism, Centre-State relationship, President: Role, power and position, PM and Council of ministers, Cabinet and Central Secretariat, Lok Sabha, Rajya Sabha	10
3	**State Government and its Administration Governor:** Role and position, CM and Council of ministers, State Secretariat: Organisation, Structure and Functions	10

4	**Local Administration District's Administration head:** Role and Importance, Municipalities: Introduction, Mayor and role of Elected Representative, CEO of Municipal Corporation, Pachayati raj: Introduction, PRI: Zila Pachayat, Elected officials and their roles, CEO Zila Pachayat: Position and role, Block level: Organizational Hierarchy (Different 4.departments), Village level: Role of Elected and Appointed officials, Importance of grass root democracy	12
5	**Election Commission:** Role and Functioning, Chief Election Commissioner and Election Commissioners, State Election Commission: Role and Functioning, Institute and Bodies for the welfare of SC/ST/OBC and women	6

TEXT BOOK AND REFERENCE BOOKS:

1. 'Indian Polity' by Laxmikanth
2. 'Indian Administration' by Subhash Kashyap
3. 'Indian Constitution' by D.D. Basu
4. 'Indian Administration' by Avasti and Avasti

Subject: Economics			
Course Code: GE6B-02			
Duration:45 Hours	**Maximum Marks:** 100		
Teaching Scheme	**Examination Scheme**		
Theory: 2	**End Semester Exam**: 70		
Tutorial: 1	**Teacher's Assessment**: 5		
Practical:0	**Internal Assessment**: 25		
Credit: 3	**Practical Sessional internal continuous evaluation**:		
	Practical Sessional external examination:		
Aim:			
Sl. No.			
1.	Build a foundational understanding of economics for Capital Markets		
2.	Establish a link between various components of the Capital Markets		
Objective:			
Sl. No.			
1.	To gain an understanding of economic concepts for Capital Markets		
Pre-Requisite:			
Sl. No.			
1.	Basic knowledge of Economics		
Contents		**Hrs./week**	
Chapter	**Name of the Topic**	**Hours**	**Marks**
01 Introduction	• Scope and Importance of Business Economics • Basic tools- Opportunity Cost principle- Incremental and Marginal Concepts • Basic economic relations - functional relations: equations- Total, Average and Marginal relations • Use of Marginal analysis in decision making, The basics of market demand, market supply and equilibrium price- shifts in the demand and supply curves and equilibrium	9	14
02 Demand Analysis	• **Demand Function -** nature of demand curve under different markets Meaning, significance, types and measurement of elasticity of demand (Price, income cross and promotional)- relationship between elasticity of demand and revenue concepts • **Demand estimation and forecasting:** Meaning and significance - methods of demand estimation: survey	9	14

	and statistical methods (numerical illustrations on trend analysis and simple linear regression)		
03 Supply and Production Decisions and Cost of Production	• **Production function:** short run analysis with Law of Variable Proportions- Production function with two variable inputs- isoquants, ridge lines and least cost combination of inputs- Long run production function and Laws of Returns to Scale - expansion path - Economies and diseconomies of Scale. • **Cost concepts:** Accounting cost and economic cost, implicit and explicit cost, fixed and variable cost - total, average and marginal cost - Cost Output Relationship in the Short Run and Long Run (hypothetical numerical problems to be discussed), LAC and Learning curve - Break even analysis (with business applications)	9	14
04 Market structure: Perfect competition and Monopoly and Pricing and Output Decisions under Imperfect Competition	• Short run and long run equilibrium of a competitive firm and of industry - monopoly - short run and long-run equilibrium of a firm under Monopoly • **Monopolistic competition:** Equilibrium of a firm under monopolistic competition, debate over role of advertising (topics to be taught using case studies from real life examples) • **Oligopolistic markets:** key attributes of oligopoly - Collusive and non-collusive oligopoly market - Price rigidity - Cartels and price leadership models (with practical examples)	9	14
05 Pricing Practices	• Cost oriented pricing methods: cost – plus (full cost) pricing, marginal cost pricing, Mark up pricing, discriminating pricing, multiple – product pricing - transfer pricing • Case studies on how pricing methods are used in business world	9	14
	Sub Total:	**45**	**70**
	Internal Assessment Examination & Preparation of Semester Examination		**30**
	Total:		**100**

Practical:

Skills to be developed:

Intellectual skills:

1. Analytical skills. Economists must be able to review data, observe patterns, and draw logical conclusions. ...

2. Communication skills. Economists must be able to explain their work to others. ...
3. Critical-thinking skills. ...
4. Math skills. ...

Motor Skills:

1.Detail oriented.
2.Writing skills

Assignments:

List of Books
Text Books:

Name of Author	**Title of the Book**	**Edition/ISSN/ISBN**	**Name of the Publisher**
Roy E. Bailey	The Economics of Financial Markets	2005/978-0521612807	Cambridge University Press
Paul Heyne,Peter Boettke,David Prychitko	The Economic way of Thinking	978/0132991292	Pearson
Premvir Kapoor	Sociology and Economics for Engineers	978-9386173027	Khanna Publishing Company
Reference Books:			
Milton Friedman	Money Mischief	1994/ 978-0156619301	Harcourt Publishers Group

List of equipment/apparatus for laboratory experiments:

Sl. No.	
1.	**NA**
2.	

End Semester Examination Scheme. Maximum Marks-70. Time allotted-3hrs.

Group	**Unit**	**Objective Questions** (MCQ only with the correct answer)		**Subjective Questions**			
		No of question to be set	Total Marks	No of question to be set	To answer	Marks per question	Total Marks
A	**1,2,3, 4**	**10**	**18**	**3**	**2**	**4**	**52**
B	**4,5, 6, 7, 8**	**10**		**4**	**3**		

- Only multiple choice type question (MCQ) with one correct answer are to be set in the objective part.
- Specific instruction to the students to maintain the order in answering objective questions should be given on top of the question paper.

Course Name: Mind and Measurement

Course Code: GE6B-03

Mode- Offline/ Blended **Credits: 3**

Course Objectives: The course has been designed to explore the emotional and motivational states of mind along with knowledge and application of higher cognitive functions. The learner will be able to apply the knowledge of cognition, conation and effect on the human psyche in the context of personal and professional domains and make a relation between brain and body through the understanding of Human Physiology, various psychological processes and changes throughout the lifespan of humans.

Sl	Course Outcome	Mapped modules
CO1	Explaining the concept and the physiological correlates of emotion.	(M1) BL2
CO2	Understanding the different theoretical aspects of emotion.	(M2) BL2
CO3	Explaining the concept and the physiological correlates of motivation.	(M3) BL2
CO4	Understanding the different theoretical aspects of motivation.	(M4) BL2
CO5	Labelling different span of attention.	(M5) BL2
CO6	Assessment of memorization capacity	(M6) BL1, BL2

Module	Content	Total Hours	%ageof questions	Blooms Level (if applicable)	Remarks (If any)
Module 1	Define Emotion and Physiological correlates of emotion: Electrical, Circulatory changes, Respiration and Peripheral measures. The role of Cortex in Emotions. Concept of Homeostasis.	5	15	2	
Module 2	Theories of Emotion : James-Lange; Cannon-Bard, Lindsay, Schachter-Singer, and Lazarus	6	20	2	
Module 3	Understanding the concept of Motivation in connection to its role in education and physiological basis of hunger, thirst.	6	20	2	
Module 4	Theories of Motivation – Maslow, McClelland, Murray. Application, Nature of thinking; Inductive and Deductive	8	15	2	

	reasoning; Problem solving approaches				
Module 5	Assessment of the different span of attention- sustained attention (digit vigilance test) test of divided attention (triad) test of focused attention (trail making)	9	15	2	
Module 6	Interpretation and practical application of memory, learning and forgetting using - whole vs part learning, spaced vs un-spaced learning, retroactive inhibition, pro-active inhibition. Learning curve,	11	15	1,2	
		45	100		

Detailed Syllabus

Module 1- Define Emotion, Nature, Impact & Expression. Physiological correlates of emotion: Electrical, Circulatory changes, Respiration and Peripheral measures. The role of Cortex, Hypothalamus & Limbic System in Emotions. Concept of Homeostasis. Kluver-Bucy Syndrome. **Total Hours: 5**
Module 2- Theories of Emotion: James-Lange Theory of Emotion; Cannon-Bard Thalamic Theory of Emotion, Activation Theory of Emotion by Lindsley, Two Factor Theory by Schachter-Singer, and Cognitive Appraisal Theory of Lazarus: Concept, Research Evidence, Implication, Critical Appraisal for each theory. Total Hours: 6
Module 3- Understanding the concept of Motivation, Drive, Need, Impulse in connection to its role in education, physiological basis of hunger, thirst: mechanisms within the system with neurobiological underpinning & special emphasis on research evidence.**Total Hours: 6**
Module 4- Theories of Motivation – Need Hierarchical Theory by Maslow, Achievement Motivation Theory by McClelland, Theory of Psychogenic Needs by Murray: Concept, Research Evidence, Implication, Critical Appraisal for each theory, Application, Nature of thinking; Inductive and Deductive reasoning; Problem solving approaches.**Total Hours:8**
Module 5- Practicum Assessment of the different span of attention- sustained attention (digit vigilance test) Test of divided attention (triad) Test of focused attention (trail making) **Total Hours: 9**
Module 6-Practicum Interpretation and practical application of memory, learning and forgetting using - whole vs part learning, spaced vs un-spaced learning, retroactive inhibition, pro-active inhibition. Learning curve.**Total Hours: 11**

Suggested Readings

- Morgan, C. T., King, R. A., Weisz, J. R., &Schopler, J. (2006). Introduction to Psychology, 7th eds.
- Fredrickson, B., Loftus, G. R., Lutz, C., & Nolen-Hoeksema, S. (2014). *Atkinson and Hilgard's introduction to psychology*. Cengage Learning EMEA.
- Schultz, D. P., & Schultz, S. E. (2020). *Psychology and work today*. Routledge.

- Woodsworth, R. S., & Schlosberg, H. (1954). Experimental psychology (Rev. ed.). *New York: Holt*

Course Name-Sustainability & Fashion

Course Code-GE6B-04

Mode- Offline/ Blended

Course Objectives:

The course is designed to provide working knowledge of Environmental, Sustainable, and Ethical issues prevailing in the world. Students will be able to understand the relation between sustainable development goals and fashion industry.

Course Outcomes (CO):

Sl	Course Outcome	Mapped modules
1	Remember & Understand Environmental, Sustainable & Ethical issues being faced today and their causes	M1
2	Remember & Understand the Role of sustainable, ethical and environmental organizations	M2
3	Remember & Understand the innovation in sustainable thinking for the future	M3
4	Remember & Understand the roles and impact designers have on the natural resources and the environment	M4
5	Remember & Understand the renewable & non-renewable energy	M5
6	Remember & Understand the possibilities in sustainable and ethical fashion	M6

Module Number	Content	Total Hours	%age of questions	Blooms Level (if applicable)	Remarks (If any)
M1	Environmental & Sustainability Issues	8	20	1,2	
M2	Sustainable & Ethical focused Organizations	6	14	1,2	
M3	Innovations in sustainable thinking for the future	6	14	1,2	
M4	Resource consumption and depletion	6	16	1,2	
M5	Renewable Energy Vs. Non-Renewable Energy	9	16	1,2	
M6	Fashion Design & Sustainability	10	20	1,2	
		45	**100**		

Detailed Syllabus:

ModuleI (8 Hours)

Environmental & Sustainability Issues: Climate Change & Global Warming, Pollution, Resource depletion, Consumerism and the throw-away society,

ModuleII (6 Hours)

Sustainable & Ethical focused Organizations, bodies and Agencies: Greenpeace, Earth day Network, Ethical Fashion Forum, United Nations, Fair Trade, World Wildlife Fund (WWF)

ModuleIII (6 Hours)

Innovations in sustainable thinking for the future: UN Sustainable Development Goals, The Paris Climate Agreement, Ocean Clean-Up

Module IV (6 Hours)

Resource consumption and depletion: Deforestation, Fossil Fuels, Sand, Minerals, Precious Stones & Metals

ModuleV (9 Hours)

Renewable Energy Vs. Non-Renewable Energy: Impact of non-renewable i.e. traditional fossil fuel based energies, Renewable energy systems and technology innovations, Sustainable energy schemes and initiatives in India

ModuleVI (10 Hours)

Fashion Design & Sustainability: Sustainable Fashion design concepts, Sustainable materials for fashion and an understanding of the impacts of our materials choices, Future trends within sustainable fashion, an overview of the key issues the fashion and textiles industry faces, Discussion on the impact of new emerging technologies

Suggested readings:

1. Introduction to Sustainability Paperback – 2016 by Robert Brinkmann
2. Sustainability in Interior Design Book by Sian Moxon
3. References:
1. Centre for Sustainable Fashion- www.sustainable-2. MISTRA Future Fashion- www.mistrafuturefashiofans.choiomn .com
3. Sustainable Clothing Action Plan: Clothing Knowledge Hub- www.wrap.org.uk/node/19930
4. Textiles Environment Design- www.tedresearch.net
5. Textile Futures Research Centre -www.tfrc.org.uk
6. Sandy Black | The Sustainable Fashion Handbook 2012
Tamsin Blanchard | Green is the New Black: How to Change The World with Style 2008

7. Michael Braungart and William McDonough | Cradle to Cradle: Remaking the Way We Make Things 2009
8. Sass Brown | ReFashioned: Cutting Edge clothing from Recycled Materials 2013
9. Elisabeth Cline | Overdressed: The Shockingly High Cost of Cheap Fashion 2012
10. Kate Fletcher and Lynda Grose | Fashion and Sustainability: Design for Change 2012

Paper Name- Indian History & Culture (GE6B-05)

Total Credit: 3
Total hours of lectures:45 hours

Sl.	Topic/Module	Hour
1.	**Unit-I** The pre-historic period, Indus Valley Civilization - Source of Information, Characteristics of Indian culture & society in the pre-historic ages and Indus valley civilization. Vedic Period – Early and Later Vedic period. . Jainism, Teaching & Principles of Jainism, Contribution of Jainism to Indian Culture. Buddhism- Rise and Growth, Doctrines of Buddhism.	8
2.	**Unit-II** Mauryan Period – origin, growth and contribution, Sunga Dynasty, Kusana Dynasty, Gupta Period – political, religious, socio-cultural and economic development during Maurya to Gupta period. Art & Architecture during Mauryan and Gupta period Political condition of North India, South India and Eastern India after Guptas.	8
3.	**Unit-III** History of Medieval India 1206 - 1526 A.D. Rise of Turks, causes of Success of Arab invasion and its impact, Slave Dynasty, Khaliji Dynasty, Tughlaq Dynasty, Sayyid Dynasty, Lodhi Dynasty. Moghul dynasty. Indo Islamic & Mughal Architecture.	8
4.	**Unit- IV** Political Condition of India after Moghul- Decline of Mughal emperor and its impact. Shivaji & the rise of the Marathas. Advent of Europeans in India – Establishment of East India company and other European companies. Establishment of British Rule in India.	7
5.	**Unit-V** Social and religious reforms movement in India, Brahma Samaj, Arya Samaj, Rama Krishna Mission, Social Traditions, Economic, political, religious and social development post-Independence.	7

6.	**Unit-VI** Concept of Cultural Tourism. Performing Arts- Classical Music, Classical Dance- various formation, Theatre, Visual Arts- Paintings, Sculpture, Different fairs & festivals in India. Various handicrafts items in India, folk culture in India,	7

Suggested reading

1) Themes of Indian History – Part 1, 2, 3 – NCERT (2013)
2) Mitter. Partha (2001), Indian Art, Oxford Publications, London
3) R. S. Sharma – India's ancient Past, Oxford University Press
4) 2. Romila Thapar- Penguin History of India
5) R.C.Mazumdar, H.C.Roychowdhury & K. K. Dutta Advance History of India
6) Singhania. Nitin (2015), Indian Art and Culture, Tata McGraw Hill Education
7) Mukul Chandra Bora, Bhartiya Knowledge System, Khanna Publishing House.

Paper Code: GE6B-06
Paper Name- Values & Ethics
Total Credit: 3
Total hours of lectures: 45 hours

Sl.	Topic/Module	Hour
1.	**Module 1: Indian Society**--Society and its types, Features of Tribal Society, Agrarian Society, Industrial Society, Post-Industrial Society. Population and Society - Interface between population size and social development Concepts and measurement of population: Birth rate, Death rate, Migration. Population pyramid of India, Social implications of age sex in India. Population Explosion & its consequences. Population policy of Govt. of India A Critical appraisal, problems of implementing growth control measures, causes for success and failures.	10
2.	**Module 2** : **Social Stratification**-Concepts, Types, Social Mobility Socio-Economic Problems : Poverty, Illiteracy, Unemployment, Child Labour, Occupational Diseases, Crime, Project Affected People, Aged Population, Juvenile Delinquency, Strategies to solve/ minimize the problem.	6
3.	**Module 3**: **Industry and Society** - Factory as a Social System, Formal and Informal Organization, Impact of Industry on Society (Family and Industry),Social and Cultural Impediments to Industrialization	6
4.	**Module 4** : **Value:** Definition, Importance and application of Value in life. Formation of Value: Process of Socialization, self and integrated personality. Types of values: Social, Psychological, Aesthetic, Spiritual, Organizational. Value crisis in contemporary society: individual, societal cultural and management level(strategy and case studies)	9
5.	**Module 5** : **Introduction to Business Ethics** :Definition and Important Ethics in the Workplace: code of conduct, code of ethics;	5
6.	**Module 6** : **Corporate Responsibility:** Definition and Case Study Corporate Compliance: Definition, Responsibility &Laws and Regulations Consumer Rights: Expectations and Reality, connection between Business and Society	9

Suggested Readings:

1. Andre Beteille: Society and Politics in India, OUP.
2. C. N. Shankar Rao: Sociology, S.Chand
3. Ram Ahuja : Social Problems in India, Rawat Publication.
4. A.C Fernando (Late): Business Ethics: An Indian Perspective, 2/e, Pearson.
5. Manna and Chakraborty: Value and Ethics in Business and Profession PHI.
6. Shailendra Kumar and Alok Kumar Rai: Business Ethics, Cengage Learning India Pvt. Ltd.
7. Professional Ethics and Human Values | AICTE Recommended, Khanna Publishing House.

Course Name: Enhancing Linguistic Competence & Developing Literary Skills

Course Code: GE6B-07

Credits: 3

Course Objective: The course is designed to provide a deep insight into the various vistas of English Language and develop the literary aptitude to face the world with confidante.Apart from the conventional grammar lessons; the selected pieces from the domain of literature will enhance the depth of the students in the subject. The prose and novel sections will enable them to think beyond the books. However, the poems will make the individuals take a flight of fantasy. The classic blend of language and literature is certainly a boon for the aspiring candidates. This is really a unique approach towards the new world of humanities and will hopefully be accepted and embraced by all and sundry.

S.No.	Course Outcome	Mapped Modules
1	Understand the structure and function of Grammar.	M_1& M_2
2	Understand the approach towards dealing the topics of variety and beyond.	M_2& M_4
3	Understand and develop a strong passion for the literary pieces.	M_3& M_4
4	Understand the technical device of Literary Skills Comprising Rhetoric &Prosody.	M_4& M_2
5	Understand and apply the basic linguistic skills pertaining to the domains of grooming viz (speaking, listening, reading)	M_1& M_5

Module No.	Content	Total Hours	% of Questions	Blooms (if applicable)	Remarks
M_1	Introduction to Grammar and application.	7	15	1	
M_2	Writing skills of variety.	7	20	1,2	
M_3	Selected pieces from prose, poetry & novel.	12	30	2,3	
M_4	Literary devices (Rhetoric Prosody)	12	20	3,4	
M_5	Oral linguistic competence & the subsequent development for interview.	7	15	1,5	
--	--	45	100		

Detailed Syllabus

Module 1: Introduction to Grammar and application: The phrases& clauses, Noun case, Noun Gender, Verbs of incomplete predication, Mood, Tense, Analysis of sentences (Compound only), Synthesis of Sentences, Idioms, Punctuations.

Module 2: Writing skills of variety: Essay (Descriptive, Reflective, and Analytical), Story, Short Poems, Letters (Professional approach), Autobiographies, Précis, and Dialogue.

Module 3: Selected pieces from Prose, Poetry & Novel.
Novel: Far From the Madding Crowd – Thomas Hardy.
Prose: Category- Short Stories.

(a) Fly - Katherine Mansfield
(b) The Kite - Somerset Maugham.
(c) The Hungry Stone - Rabindranath Tagore.

Poetry:

(a) To Daffodils - Robert Herrick.
(b) A Musical Instrument - Elizabeth Barrett Browning.
(c) My Last Duchess - Robert Browning.

Module 4: Practicing Rhetoric (Figures of Speech: Simile, Metaphor, Pun, Onomatopoeia, Alliteration, Assonance, Imaginary, Litotes, Synecdoche, Personification, Epigram, Transferred Epithet, Climax, Anticlimax) and Prosody (Scansion of selected passages from poetry).

Module 5: Developing the concepts of listening, speaking, and reading. Tactics to face the interview challenges, composing the latest trend of CV and application. Motivational and mock sessions).

Suggested Readings:

1. High School Grammar & Composition; Wren & Martin. S Chand & Company LTD
2. Principles Of English (Rhetoric &Prosody), M.Chakroborti- The World Press Private LTD
3. College Essays (D N Ghosh)- Calcutta Book Publishers
4. Personality Development & Soft Skills; Barun & Mitra – Oxford Higher Education.
5. Effective Communication Skills, Kulbhushan Kumar – Khanna Publishing House.

COURSE NAME: **MEDICAL ETHICS, LAW AND ETIQUETTE**

Course Code: GE6B-08
Credit: 3

COURSE OBJECTIVES: This course is designed to provide students the key concepts in healthcare ethics and its core principles. The use and application of this information can help students learn about various medical law and ethical issues in this emerging field. The students will learn the fundamentals of ethical relationships that govern healthcare system.

Sl No:	**Course Outcome**	**Mapped modules**
1	Understanding the concept Of Medical Profession	M1
2	Understanding Essential elements of Contract	M2
3	Understanding Legal Aspects of the Various Act	M3
4	Understanding the theory of Euthanasia and its legality in India	M4

Module Number	Content	Total Hours	% of questions	Blooms Level
M1	Concepts of medical profession, its ethical Values and principles	8	20	1,2
M2	General law of Contract, patient protection , Contact tracing for Covid 19 Patients	10	20	1,2

M3	Legal aspects of Organ Transplantation, MTP,1971, Drugs And Cosmetics Act, PNDT, 1994	15	40	I,2,3
M4	Euthanasia: ethical issues involved, Informed consent and Debate for and against Euthanasia	12	20	1,2
		45	100	

Detailed Syllabus

M1: Concept of medical profession
Definition of hospital, ethics, law and ethics difference, Hippocratic Oath, Geneva Declaration, managing violence at the workplace, ethical principles of Autonomy, Justice, Beneficence, Non Maleficence, Fidelity and Confidentiality.

M2: Essential elements of contract- offer, acceptance, legality, free consent, enforceability, competency, not void contract. HIPAA Law application in hospitals, patient security and violation, doctor-patient relationship and medical malpractice.

M3: Learning about legal aspects of Organ Transplant, 1994, Medical Termination Act,1971, Pre natal and Diagnostic Technique Act, 1994 ,Drugs and cosmetics act, 1940 and Indian Medical Degree Act,1956

M4: Euthanasia- definition, types, legality in India, comparative study with assisted suicide, Types of medical consent, basic aspects of consent.

Suggestive Reading:

1. Medical Ethics and Law- A Curriculum for 21st Century. 13th Edition
Author-Wilkinson, Jonathan and Julian
2. Textbook of Medical Ethics by Enrich H. Loewy
3. Medical Law and Ethics In India. Author- Sandeepa Bhat
Websites: www.Ncbi.nlm.nih.gov
www.slideshare.net
www.wikipedia.org

Paper: Law and Ethics
Code : GE 6B-09
Contacts Hours / Week : 2L+1T
Credits : 3

Module	Topic
I	General Law of Contract : Essentials of a Contract - Offer and acceptance - Capacity of Parties - Free Consent - Consideration and legality of object - Void agreement and Contingent Contract
II	Consumer Protection Act ,1986 W.B Clinical Establishment Act 2000 Legal aspects relating to organ transplantation,MTP Act, 1971.
III	Drugs and Cosmetic Acts,PNDT Act, Definition of ethics. Ethical Principles & rules: core concepts. Law & ethics-a comparison. Geneva Declaration
IV	Law in relation to medical profession-Indian Medical degree Act 1916,IMC act Consent-Implied and Expressed Consent, Medical Negligence Helsinki declaration on medical research, ICMR guidelines of medical research Euthanasia-ethical framework on decision making

Suggested Readings:

1. Kapoor,N.D;2004:MercantileLaw-SultanChand&Sons:NewDelhi(Chapter1-5)
2. Kuchhel,M.c,2003,MarcentileLaw;VikasPublishingPrivateLtd.NewDelhi(chapter1-5)
3. Pathak, Legal Aspect of Business, TMH
4. P.L Mallick-Industrial Law-Eastern Book Company-Lucknow.

5. Bio-MedicalWasteManagementHandlingRule1998.
6. Law &Ethics in Nursing &Health Care, Nelson Thrones

Course Name: Surface & Soft Furnishings Design Development Techniques

Course Code-GE6B-10

Mode-Offline/ Blended

Course Objective:**The course is designed to provide a conceptual understanding of interior design of spaces with surface and soft furnishings. The students will be able to visually express with colour, texture, pattern and material effects for surface design appropriate to project specifications.**

Sl	Course Outcome	Mapped modules
1	Understand the fundamental interior design aspects of surface and soft furnishings	M1, M2, M6
2	Understand the fundamentals of textiles and types	M1, M2
3	Understand and demonstrate printing techniques	M2, M3
4	Understand the apply embroideries	M2, M3, M4
5	Understand and examine materials, techniques, and technology	M1, M2, M5
6	Apply the surface designs	M5, M6

Module Number	Content	Total Hours	%age of questions	Blooms Level (if applicable)	Remarks (If any)
Module 1	Textiles and Its Types	5	15	L1, L2	
Module 2	Research soft furnishings and textiles/fabrics used in the design	6	15	L1, L2	
Module 3	Printing and its techniques	8	15	L1, L2	
Module 4	Embroideries and its types	8	15	L1, L2	
Module 5	Exploration of materials, techniques and technologies for the development of surface design	9	15	L2, L3	
Module 6	Final surface designs and presentation	9	25	L3	
		45	100		

Detailed Syllabus:

Module -1: Textiles and Its Types

- Introduction to textiles – Indian (kalamkari, matanipachedi, ikkat) and international textiles.
- Special embellishment techniques: Batik, Tie and dye - lehariya, bandhini ,shibori, sunray and marbling.

Module – 2: Research soft furnishings and textiles/fabrics used in the design

- Table Linens
- Rugs & Carpets
- Window dressings (Curtains & Blinds)
- Towels
- Bedding & Bedspreads
- Cushions & Throws
- Lampshades
- Wallpaper
- Tiles
- Flooring

Module -3: Printing and its techniques

- Print application through block printing, Lino printing, Wood cut printing, Lithograph printing
- Print application through screen & block printing (vegetable block and wooden blocks, Appliqué, quilting, Smocking, honey comb, Fabric painting, Stencil- dabbing and spraying).
- Natural dyeing techniques and explorations.

Module -4: Embroideries and its types

- Basic Hand Embroidery, their technique, variations and applications. Basic running stitch, backstitch, stem stitch, chain stitch, lazy daisy stitch, buttonhole stitch, featherstitch, herringbone stitch, knot stitch, satin stitch and cross-stitch.
- Traditional Embroidery- Origin, application &colours. Kantha, Chikan, Kasuti, Zardosi, Kutch and Mirror work.

Module -5: Exploration of materials, techniques and technologies for the development of surface design

- Print – Screen, Block, Mono etc.
- Stenciling
- Fabric Dye (Natural and Azo free)
- Fabric paints
- Fabric and textiles Embellishment

Module -6: Final surface designs and presentation

- Develop surface designs for a range of applications.

Reference Books:

• The Complete Technology Book on Dyes & Dye Intermediates Paperback – 1 Jan 2003 by NIIR Board of Consultants & Engineers (Author)

• Biodegradation of Azo Dyes by HaticeAtacagErkurt (Editor) – Publisher: Springer (9 August 2010), ISBN-10: 3642118917

• Second Skin: Choosing and Caring for Textiles and Clothing by India Flint Murdoch Books, 2011 ISBN 978-1-74196-720

• Indigo:The Color that Changed the World by Catherine Legrand Thames & Hudson, 2013 ISBN 978-0500516607

• Warp and Weft:
Woven Textiles in Fashion, Art and Interiors by Jessica HemmingsBloomsbury, 2012 – ISBN 978-1-4081-3444-3

• Quilt National 2013:The Best of Contemporary Quilts by The Dairy Barn Cultural Arts Center

• DragonThreads Extraordinary Textile Arts Books, 2013 - ISBN 978-0-9818860-4-6

• Surface Design for Fabric: Studio Access Card Printed Access Code – February 15, 2015 by Kimberly Irwin Publisher: Fairchild Books (February 15, 2015) ISBN-10: 1501395033

B. Purushothama, Quality Management In Garment Industry, ISBN: 9789355388230

Websites

- https://www.houseology.com/masterclass/design-school/chapter-eight-soft-furnishings

https://www.twosistersecotextiles.com/pages/azo-dyes

DESIGN & HUMAN EVOLUTION

Course Code-GE6B-11

Credits: 3

Course Objectives:

To provide an overview of human evolution from prehistoric times through the lens of visual perception and design development. This course is aimed to enable the students to identify and analyse humankind's creative evolution through the ages by focusing on the visual forms and arts, culture and society, storytelling and communication and its direct impact on the world of design.

Course Outcomes (CO):

Sl	Course Outcome	Mapped modules
1	Remember & Understand the beginning of human evolution through pre-history	M1
2	Remember, Understand & Analyze the role of civilizations in the creative evolution of humankind	M2
3	Remember & Understand the importance of culture and society in the development of the visual arts	M3
4	Understand & Analyze the advancement of technology and its impact on design	M4
5	Remember, Understand & Analyze art movements and their impact on design development	M5
6	Understand & Analyze the impact of the digital age on the design industry	M6

Theory:

CO	Blooms Level (if applicable)	Modules	%age of questions
CO1	1,2	Module 1	15
CO2	1,2,4	Module 2	20
CO3	1,2	Module 3	15
CO4	2,4	Module 4	15

CO5	1,2,4	Module 5	20
CO6	2,4	Module 6	15
			100

Detailed Course Curriculum:

Module I (6 Hours)

Prehistory:

The Stone Age – brief understanding of the human evolution through Parietal Art and major innovations in primitive human society

Module II (9 Hours)

Protohistory – the impact of the Metal Age in the birth and advancement of civilizations

Civilizations – identify and study the civilizations through a comparative analysis using:

Language & Script
Mythology
Visual Forms & Artifacts
Culture & Society

Module III (7 Hours)

Middle Ages – the impact of religion and politics through symbolism and merging of cultures on lifestyle and visual forms

The Renaissance – the rediscovery of classical philosophy, literature and visual arts

Module IV (7 Hours)

Industrial Revolution – the impact of technology and consumerism on the different areas of design application

The World Wars I and II – analysis of the before and after changes on the different industries

Module V (9 Hours)

Art Movements – the various schools of thought and design from the 19th century to the 21st century

Module VI (7 Hours)

The Information Age (Digital Age/New Media Age) – analysis of the rapid change in contemporary lifestyle, visual perception and communication

The Future – What comes next?

Suggested Readings:

1. David Raizman; History Of Modern Design, Prentice Hall, 2004
2. Cross, N; Design Thinking: Understanding How Designers Think and Work, Berg, Oxford, 2011.
3. Graphic Design History: A Critical Guide by Johanna Drucker and Emily McVarish
4. Historic Costume-From Ancient Times to Renaissance-Dover Publications.
5. A Pictorial History of Costume-Pepin Press.

6. Journal of Design History, Oxford Journals
7. Carter Ron, Day Ben Meg Phillip, Typographic Design: Form and Communication, John Wiley & Sons, 1999
8. Neill, William (Photographer); Murphy, Pat; By Nature's Design ---an Exploratorium Book, Publisher: Chronicle Books, 1993
9. Antonelli, Paola; Objects Of Design, Publisher: Museum Of Modern Art, 2003
10. Clive Cazeaux; The Continental Aesthetics Reader, Routledge, 2011
11. Ann Marie Barry; Visual Intelligence: Perception, Image, And Manipulation In Visual Communication, State University Of New York Press, 1999

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Model curriculum structure for 4 year UG programs with fixed subjects for Minor in Management

Sem	Major (Offline)	Minor (Blended Mode) (Management)	Inter Disciplinary (Offline)	Ability Enhancement (Offline)	Skill Enhancement (Online /Sessional)	Common Value added Course (SESSIONAL)	Total credits
I	2 sub x 5 credits	(1 sub x 3 credits) MIM101 Principles Of Management	Any one from GE baskets Basket A or D (3 credits)	English & Professional Communication (2 credits)	Life Skills & Personality Development (2 credits)	Yoga/ Health & Wellness/ Sports / Physical Fitness and Wellness/Community Services (2 credits)	22
II	2 sub x 5 credits	(1 sub x 3 credits) MIM201A/B Organization Behaviour/Business Ethics & Corporate Governance	Any one from GE baskets Basket B or E (3 credits)	Modern Indian Languages and Literature (2 credits)	IT Skills / Monetizing Social Media or Design Thinking (2 credits)	Critical Thinking / NSS/ Mental Health/ Environmental Studies (2 credits)	22
III	2 sub x 5 credits	(1 sub x 4 credits) MIM301A/B Principles of Marketing/Business & Sustainability	Any one from GE baskets Basket C or F (3 credits)	The Constitution, Human Rights and Law (2 credits)	Understanding basics of Cyber Security (2 credits)		21
IV	2 sub x 4 credits 1 sub x 5 credits	MIM401A/B Human resource management /Corporate Social Responsibility (CSR) (4 credits) MIM402A/B Sales and distribution management /E-Commerce (4 credits)		Society Culture and Human Behavior / Universal Human Values (UHV) (2 credits)			23
V	2 sub x 5 credits	MIM501 Financial management (4 credits) MIM502 Entrepreneurship (4 credits)			Internship to be started after exam of 4th sem (sem break) and completed within 5th sem (weekends) (4 credits)		22
VI	2 sub x 5 credits 1 sub x 4 credits	MIM601 Customer relationship management (4 credits)					22

		MIM602A/B Career planning and management/Managing Workplace Diversity (4 credits)					
VII	2 sub x 5 credits 1 sub x 4 credits	MIM701A/B Consumer behaviour /Exploring Business Opportunity (4 credits) MIM702A/B Strategic management/ Intellectual Property Rights (4 credits)					22
VIII	2 sub x 5 credits				Research project 12 credits		22
	19 sub - 91 credits	**11 sub – 42 credits**	**3 sub – 09 credits**	**4 sub – 08 credits**	**3 sub & Int & Proj - 22 credits**	**2 sub – 4 credits**	**176**

Note:

Normally all 5 credit courses will be either theory (3) + practical (2) [100+100 marks] or theory (4) + tutorial (1) [100 marks]
Normally all 4 credit courses will be either theory (3) + tutorial (1) or theory (4) [100 marks]
Normally all 3 credit courses will be theory (3) – Inter disciplinary (5 to 6 baskets) [100 marks]
Normally all 2 credit courses AEC/SEC/CVA would be theory or online/sessional course
4th year subjects could be foundation of Master's program (as masters would be of 1 year after 4 years UG)
7/8th semester Major subjects could include Projects in core, if required
100/200/300/400 level should be maintained as per UGC document
For online course (Skill Enhancement Course) 2 credits=30 hours.

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Programme Outcomes for Minor Courses

	Programme Outcomes	MINOR-1	MINOR-2	MINOR-3	MINOR-4	MINOR-5	MINOR-6	MINOR-7	MINOR-8	MINOR-9	MINOR-10	MINOR-11
1	Values for life and character building	✔	✔	✔	✔		✔	✔		✔	✔	✔
2	Disciplinary knowledge	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
3	Communication skills		✔	✔	✔	✔		✔	✔		✔	
4	Critical thinking	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
5	Problem Solving	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
6	Analytical Reasoning	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
7	Research related skills	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
8	Cooperation/Teamwork	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
9	Scientific Reasoning	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
10	Reflective Thinking	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
11	Information/Digital Literacy	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
12	Self-directed Learning	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
13	Moral and Ethical Awareness/Reasoning	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
14	Leadership Readiness/Qualities	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
15	Lifelong learning	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
16	Professional Skills	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔

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Semester I Minor-I

Detailed Syllabus

Course: Principles of Management	
Course Code: MIM101	**Semester: I**
	Maximum Marks: 100
Teaching Scheme	**Examination Scheme**
Theory: 3	End semester Exam: 70
Tutorial: 0	Attendance: 5
Practical: 0	Continuous Assessment: 25
Credit: 3	Practical/Seasonal internal continuous evaluation: 0
	Practical/Seasonal external examination: 0

Sl. No.	Course Objective
1	To help the students to develop cognizance of the importance of management principles.
2	To enable them to analyze and understand the environment of the organization.
3	To study the all-management functions of organization.
4	To enable them to understand the structure and changes of the organization.

	Course Outcomes	Mapped module/Unit
CO 1	Students will be able to have clear understanding of managerial functions, theories and same basic knowledge on management.	U1
CO 2	Students will be able to have clear understanding planning function in detail.	U1,U2
CO 3	Students will be able to have clear understanding of organization structure.	U2,U3
CO 4	Students will be able to have clear understanding of how to lead and motivate.	U3,U4
CO 5	Students will be able to have clear understanding of managerial change and resistance.	U5

Learning Outcome/Skills:

The candidate will be able to focus on the critical domains of management, planning and decision making moreover he will he will gain the expertise on the organisational skills leading and motivation and the techniques adopted for controlling and resisting the managerial skills.

Unit	Total Hours	% of Questions	Bloom's Taxonomy	Remarks, if any
THEORY				
U1	**10**	**25**	**1**	**NA**
U2	**10**	**25**	**1,**	**NA**
U3	**8**	**15**	**1, 2**	**NA**
U4	**8**	**15**	**1, 2**	**NA**
U5	**9**	**20**	**1, 2**	**NA**
	45	**100%**		

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Course Code:	**MIM101**	
Course:	**Principles of Management** Credits:3.0	
	Contents	
Chapter	**Name of the topic**	**Hours**
Unit-I	Introduction to Management • Definition and nature of management • Evolution of management theories • Functions of management (planning, organizing, leading, controlling) • Roles and skills of managers • Managerial levels and hierarchy	**10**
Unit-II	Planning and Decision Making • Importance and benefits of planning • Types of plans (strategic, tactical, operational) • Steps in planning • Environmental scanning • Decision-making process and techniques	**10**
Unit-III	Organizing • Organizational structure • Departmentalization and span of control • Authority, responsibility, and delegation	**8**
Unit-IV	Leading and Motivating • Leadership-- definition and styles • Communication and its importance • Motivation theories	**8**
Unit-V	Controlling and resistance to management • Elements of control process • Types of control (feedforward, concurrent, feedback) • Concept of resistance to change • Overcoming resistance to change	**9**
	Total	**45**

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List of Books

Name of Author	Title of the Book	Name of the Publisher
Premvir Kapoor	Principles of Management	Khanna Publishing House
Stoner James.A., Freeman Edward, Gilbert Daniel	Management	Pearson
Weihrich and Koontz, et al	Essentials of Management	Tata McGraw Hill
V.S.P Rao & Hari Krishna	Management-Text & Cases	Excel Books
Ramaswami T	Principles of Management	Himalaya Publishing
Dipak Kumar Bhattacharyya	Principles of Management - Text and Cases	Pearson
Robbins, S. P	Management	Prentice Hall

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Semester II

Minor-2

Detailed Syllabus

Course: Organizational Behaviour	
Course Code:MIM201A	**Semester: II**
	Maximum Marks: 100
Teaching Scheme	**Examination Scheme**
Theory: 3	End semester Exam: 70
Tutorial: 0	Attendance: 5
Practical: 0	Continuous Assessment:25
Credit: 3	Practical/Seasonal internal continuous evaluation: 0
	Practical/Seasonal external examination: 0

Sl. No.	**Course Objective**
1	Understand the fundamental concepts and theories of organizational behaviour.
2	Explore group dynamics, teamwork, and decision-making processes within organizations.
3	Examine the challenges and opportunities of managing diversity and inclusion in organizations.
4	Analyze the role of leadership, power, and politics in shaping behaviour and organizational outcomes.
5	Gain insights into global and cross-cultural aspects of organizational behaviours.

	Course Outcomes	**Mapped module/Unit**
CO 1	Students will be able to have clear understanding of basic and history of Organization behaviour	U1
CO 2	Students will be able to have clear understanding about individual behaviour aspects.	U1,U2
CO 3	Students will be able to have clear understanding about group dynamics	U3
CO 4	Students will be able to have clear understanding about power and political behaviour.	U1,U4
CO 5	Students will be able to have clear understanding of global organization behaviour.	U5

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Learning Outcome/Skills:

The candidate will acquire the skill to understand the basic tenets of organizational behaviour individual behaviour group and team dynamics power and political behaviour and international organizational behaviour. This skill will highly enable the candidate to carve a niche in the desired domain.

Unit	Total Hours	% of Questions	Bloom's Taxonomy	Remarks, if any
THEORY				
U1	**10**	**25**	**1**	**NA**
U2	**10**	**25**	**1, 2**	**NA**
U3	**8**	**15**	**1, 2**	**NA**
U4	**9**	**20**	**1, 2**	**NA**
U5	**8**	**15**	**1, 2**	**NA**
	45	**100%**		

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Course Code:	**MIM201A**	
Course:	**ORGANIZATIONAL BEHAVIOUR** Credits:3.0	
Chapter	**Name of the Topic**	**Hours**
Unit-I	Introduction to Organizational Behaviour • Definition and scope of organizational behaviour • Historical development of organizational behaviour • Importance of studying organizational behavior • Individual behaviour in organizations	**10**
Unit-II	Individual Behaviour • Personality definition, theories • Perception, attribution, and attitudes • Learning theories • Job satisfaction	**10**
Unit-III	Group and Team Dynamics • Types of groups in organizations • Stages of group development • Conflict management and negotiation skills	**8**
Unit-IV	Power and Political behaviour • Definition, • Power Dynamics • Sources • Power tactics • Essence of politics • Types of political activities.	**9**
Unit-V	International Organizational Behaviour • Definition, nature, characteristics • Cross-cultural differences and their impact on behaviour • Organizational behaviour trends and future challenges	**8**
	Total	**45**

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List of Books

Sr. No.	Name of Author	Title of the BOOK	Publication
1	K. Aswathappa	Organizational behaviour, Text, Cases and Games	Himalaya Publishing House
2	Stephen P. Robbins	Organizational Behaviour, Eighteen Edition	Pearson
3	Stephen P. Robbins	Essentials of Organizational Behavior, Fourteenth Edition	Pearson
4	Fred Luthans	Organizational behavior: A modern behavioral approach to management	McGraw-Hill
5	Khanka S.S	Organizational Behaviour	S Chand & Company

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Course Code: MIM201B
Course Name: Business Ethics and Corporate Governance
Total hours of lectures: 40 hours

Total Credit: 3

Mode: offline

Aim of the course:

1. Develop a profound understanding of business ethics and values, exploring their significance in the corporate environment and broader societal impact.
2. Gain insights into the ethical dimensions of management, emphasizing the importance of ethical decision-making and responsible business practices.
3. Examine various approaches to business ethics, allowing students to appreciate the diversity of ethical perspectives in the business context.
4. Master the concepts of corporate governance and Corporate Social Responsibility (CSR), including an exploration of relevant Indian Acts, to instill ethical practices in organizational governance.
5. Foster critical thinking skills to analyze and propose ethical solutions to diverse global business issues, integrating ethical theories into practical business scenarios.
6. Inculcate a commitment to lifelong learning, emphasizing the development of interpersonal communication and personality skills, aligning with the broader goals of personal and professional growth.

Course Objective:

After completion of this course, the students will be able to

1. Understand the moral principles and serves that govern the way an organization operates.
2. Relate with ethical practices in real life associated with different departments of organizations.
3. Comprehend various approaches to ethical behavior in business.
4. Classify different management concerns to structure an organization for effective governance.
5. Learn about the laws and regulations needed to simplify the functions of any organization.

Sl.	Graduate attributes	Mapped Modules
CO1	Understand the moral principles and serves that govern the way an organization operates.	**M1**
CO2	Relate with ethical practices in real life associated with different departments of organizations	**M2**
CO3	Comprehend various approaches to ethical behavior in business.	**M3**
CO4	Classify different management concerns to structure an organization for effective governance	**M4**
CO5	Learn about the laws and regulations needed to simplify the functions of any organization.	**M5**

Learning Outcome/ Skills:

Understanding business governance and ethics helps organizations comply with laws and regulations. It ensures that businesses operate within the legal framework, reducing the risk of legal issues and penalties.

Ethical business practices contribute to a positive reputation. Consumers, employees, investors, and other stakeholders are increasingly concerned with the ethical behavior of businesses. Maintaining a good reputation can enhance customer trust, attract top talent, and secure investor confidence. By implementing ethical practices and robust governance structures, businesses can mitigate the potential for financial, legal, and reputational risks.

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Module Number	Content	Total Hours	% of questions	BloomLevel (applicable)	Remarks,if any
THEORY					
M1	Introduction to business ethics and values	6	15	1,2	**NA**
M2	Ethics in management	8	15	1,2	**NA**
M3	Approaches to Business Ethics	6	25	1,2,3	**NA**
M4	Corporate Governance & CSR	8	25	1,2,3	**NA**
M5	Indian Acts	12	20	2,3	**NA**
Total Theory		40	100		

Detailed Syllabus

Sl.	Topic/Module	Hours
1.	**UNIT 1:** Introduction to business ethics and values, Meaning, Nature of business ethics, Importance of business ethics, Factors influencing business ethics, Arguments for and against business ethics, Ethical dilemma, Characteristics ,Types of ethical dilemmas, dilemma resolution process	6
2	**UNIT 2:** Ethics in management: Ethics in HRM- Importance, Managing ethical issues in HRM; Marketing ethics- Importance, Ethical issues in marketing, Ethical behaviour in relation to suppliers, competitors; Ethics in Finance and Accounts.	8
3	**UNIT 3:** Approaches to Business Ethics, Teleological Approach, The Deontological Approach, Kohlberg"s six stage of moral development (CMD), Ethics in workplace, code of conduct, corporate responsibility and compliance, Indian approaches towards business ethics	6
4	**UNIT 4:** Corporate Governance & CSR: Meaning, Features of good corporate governance, Factors influencing corporate governance, Corporate governance in India, Amendments to Corporate Governance, CSR- Concept and initiatives in India.	8
5	**UNIT 5:** Indian Acts**:** Indian Contract Act, 1872 - Contract defined, Elements of valid contract, Classification of contracts, Offer and acceptance, Consideration, Capacity to contracts, Free consent, Legality of object and consideration, Illegal agreements, Termination of contracts, Breach of contract, Indemnity and guarantee, Laws of agency Sale of Goods Act, 1930 - Classification of goods, Conditions & Warranties, Passing of ownership rights, Rights of an unpaid seller, Remedies for breach of Contract of Sale of Goods. Companies Act, 1956 - Nature and kinds of companies, Formation, Memorandum, Articles, Prospectus, Capital shares, debentures, borrowing powers, minimum subscription, Appointment of Directors; Winding up of	12

	companies (Including Amendments)	

Suggested Readings:

1. Andre Beteille: Society and Politics in India, OUP.

2. C. N. Shankar Rao: Sociology, S.Chand

3. Ram Ahuja: Social Problems in India, Rawat Publication.

4 . A.C Fernando (Late): Business Ethics: An Indian Perspective, 2/e, Pearson.

5. Premvir Kapoor, Professional Ethics and Human Values, Khanna Publishing House

6. Premvir Kapoor, Sociology & Economics for Engineers, Khanna Publishing House

7. Manna and Chakraborty: Value and Ethics in Business and Profession PHI

8. Govindarajan M. Natarajan S and Senthilkumar V.S: Engineering Ethics, PH

Maulana Abul Kalam Azad University of Technology, WB
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Paper code: MIM301A

Mode: Offline **Credits: 4**

PRINCIPLES OF MARKETING

Aims of the course: The objective is to attain a comprehensive understanding of the basics of Marketing

Course Objectives: Upon finishing this course, students should have a grasp of the foundational tenets of Marketing Management.

Course Outcomes:

CO1: This course equips students with foundational knowledge in Marketing Management.

CO2: Through this course, students will know the fundamentals of a Marketing plan.

CO3: The course will facilitate active learning and acquiring knowledge regarding emerging marketing management trends.

CO4: The course is designed to furnish students with decision-making skills relevant to marketing

CO5: Upon completing this course, students will be equipped to find solutions to marketing challenges and explore possibilities in practical settings.

Sl	Course content	Hour allotted
M1	● What is marketing? ● What is marketing: Goods, Services, Events, Experiences, Persons, Places, Properties, Organizations, Information, Ideas ● Marketer, Demand, Market-types- Consumer market, business market, global market, non-profit and government market ● Need, Want, Demand ● Marketing channels: Communication channels, Sales Channels and Distribution channels ● Marketing Orientations: Production Concept, Product Concept, Selling Concept, Marketing Concept, Societal Marketing Concept, Holistic Marketing Concept ● Customer value, customer relationship, customer satisfaction, customer-generated marketing, customer retention, and loyalty	**6**
M2	● 4Ps of Marketing: Product, Price, Place, Promotion ● 4As of Marketing: Acceptability, Affordability, Accessibility, Awareness ● Additional Ps: People, Processes, Programs ● Marketing Environment: Major components of the micro-environment (Company, Suppliers, Marketing intermediaries, Competitors, Publics, Customers) and macro environment, Demographic and Economic Environment, Natural and Technological Environment, Political and Social-Cultural Environment	**6**

M3	● Marketing research ● Marketing strategy: Building customer value, engagement and relationships: ● Marketing strategy and marketing mix- segmentation (geographic, demographic, psychographic, behavioral) and targeting, differentiation, and positioning ● Consumer behavior, consumer behavior model, Characteristics affecting consumer behavior- cultural, social, personal, psychological	**8**
M4	● Product & service: Product Classification, Product and Services differentiation; Product Levels, Product Mix (BASIC), Product Life Cycle, New Product Development – definition, reasons, new product development process ● Product and Service Decisions: Product and Service Attributes, Branding, Packaging, Labelling and Logos, Support Services ● Product Line Decision ● Product Mix Decisions ● Branding Strategy: What is a brand, brand image, identity and Brand Equity, Brand Value, Brand Positioning,	**6**
M5	● The New Role of Intermediaries ● Factors Influencing Distribution Decisions ● Evaluation of Channel Alternatives ● Channel Management	**4**
M6	● Marketing Communication Channels ● Promotion Mix	**4**
M7	● What is price? ● Pricing Strategies: Customer Value-Based Pricing, Cost-Based Pricing, Competition-Based Pricing, Other Internal and External Considerations affecting pricing	**4**
M8	● Sustainable Marketing and Marketing Ethics ● Digital Marketing ● Emerging Marketing Challenges ● Making a marketing plan	**4**

Learning Outcome/ Skills: Students should be able to understand the basic concepts of marketing and create a rudimentary marketing plan

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Module Number	Content	Total Hours	% of questions	Bloom Level (applicable)	Remarks, if any
THEORY					
M1	Introduction to Marketing	**8**	**20**	**1,2**	**NA**
M2	Marketing Environment and strategy	4	**20**	**1,2,3**	**NA**
M3	Market Research and Consumer behavior	8	**20**	**1,2**	**NA**
M4	Product and Branding	7	**10**	**1,2,3**	**NA**
M5	Pricing and Marketing Channels	6	**10**	**1,2,3**	**NA**
M6	Sustainable marketing and ethics	8	**20**	**1,2,3**	**NA**
Total Theory		**40**	**100**		
TUTORIAL		**8**			
TOTAL		**48**			

Reference Books:

Principles of Marketing (19th Edition) by Philip Kotler, Gary Armstrong and Sridhar Balasubramanian

Maulana Abul Kalam Azad University of Technology, WB
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Course Name: Business and sustainability
MIM -301B(Minor)

Mode: Offline **Credits: 4(3L+1T)**

Aim of the course: Sustainability in hospital management aims to enhance the efficiency and effectiveness of healthcare delivery processes while ensuring quality patient care. This involves improving resource utilization, streamlining workflows, and reducing waste to maximize the value of healthcare services provided.

Course Objectives: It Provides students with a comprehensive understanding of sustainability principles, including environmental, social, and economic dimensions, and their relevance to hospital management.

Goals:

CO1: Ensure students grasp fundamental sustainability principles, including environmental sustainability, social responsibility, and economic viability, and understand their relevance to business operations.

CO2: Enable students to critically analyze current business practices and their impact on the environment, society, and long-term economic viability, identifying opportunities for improvement and innovation.

CO3: Teach students how to integrate sustainability considerations into business strategy formulation, decision-making processes, and organizational culture to create value for stakeholders while minimizing negative impacts on the environment and society.

CO4: Train students to identify and manage sustainability-related risks and opportunities, such as regulatory compliance, reputation management, resource scarcity, and emerging market trends, to enhance business resilience and competitiveness.

CO5: Provide students with a global perspective on sustainability challenges and opportunities, recognizing the interconnectedness of local and global environmental and social issues and the importance of cross-cultural collaboration and cooperation.

Sl	Course content	Mapped Module	Hours allotted
CO1	Business: Definition, Characteristics of business, nature of business, types of businesses.	M1	5
CO2	Sustainability and Sustainable Development: Understanding business sustainability, Introduction to Sustainable Development, Theoretical Background, Importance, Principles, Pillars of Sustainability.	M2	8
CO3	Sustainability Tools: Tools for Sustainable Business Management, Green Strategies in Business Operations, Vision 2030, Elements in Marketing and Human Resource Management towards Green strategies.	M3	7
CO4	Sustainability Standards and Strategies- concept and application, Club of Rome, Environment Impact Assessment, Project Feasibility study and Report, Green Peace, Green Architecture and Green Practice	M4	5
CO5	New perspective towards Sustainability, Global Management in Today's World, Managing Diversity, Managing Social Responsibility and Ethics, Managing Change and Innovation.	M5	5

Learning Outcome/ Skills:

1. **Understanding of Sustainability Concepts**: Gain a deep understanding of sustainability principles, including environmental, social, and economic dimensions, and their relevance to business operations and decision-making.

2. **Critical Thinking and Analysis**: Develop critical thinking skills to analyze complex sustainability challenges, evaluate different perspectives, and identify opportunities for sustainable business practices and innovation.

3. **Strategic Sustainability Integration**: Learn how to integrate sustainability considerations into business strategy formulation, organizational culture, and stakeholder engagement processes to create long-term value and competitive advantage.

4. **Environmental and Social Impact Assessment**: Acquire skills in assessing and measuring the environmental and social impact of business operations, using tools such as life cycle assessment and social impact assessment.

5. **Sustainable Business Practices**: Gain practical knowledge of sustainable business practices and tools, including energy efficiency measures, waste reduction strategies, sustainable supply chain management, and green product development.

6. **Stakeholder Engagement and Communication**: Develop effective communication skills to engage with stakeholders, including employees, customers, investors, and communities, and communicate sustainability goals, progress, and initiatives transparently and persuasively.

7. **Risk Management and Resilience**: Learn how to identify, assess, and manage sustainability-related risks and opportunities, including regulatory compliance, reputation management, resource scarcity, and climate change impacts, to enhance organizational resilience.

8. **Ethical Leadership and Corporate Governance**: Understand the principles of ethical leadership and corporate governance, including transparency, accountability, and integrity, and their importance in fostering trust and credibility with stakeholders.

9. **Innovation for Sustainability**: Explore innovative solutions and business models that promote sustainability, such as circular economy approaches, product-service systems, and sustainable finance mechanisms, to drive positive environmental and social impact.

10. **Global Perspective and Cross-Cultural Competence:** Develop a global perspective on sustainability challenges and opportunities, recognizing the interconnectedness of local and global environmental and social issues, and the importance of cross-cultural collaboration and cooperation.

Module Number	Content	Total Hours	% of questions	Bloom Level (applicable)	Remarks, if any
M1	Business	5	20%	1,2	NA
M2	Sustainability and Sustainable Development	8	30%	1,2,3	NA
M3	Sustainability Tools	7	20%	1,2,3	NA
M4	Sustainability Standards and Strategies	5	10%	1,2,3	NA

M5	New perspective towards Sustainability	5	20%	2,3	NA
Total Theory		30	100		
Tutorial		8			
Total		38			

Maulana Abul Kalam Azad University of Technology, WB
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Paper code: MIM401A

Mode: Offline **Credits: 4(3L+1T)**

HUMAN RESOURCE MANAGEMENT

Aim of the Course: The objective is to attain a comprehensive understanding of management.

Course Objectives: The course is designed to foster comprehension of the core principles of management. It also covers operational aspects. Upon finishing this course, students should have a grasp of the foundational tenets of management.

Goals:

After the completion of this course the students will be able to -

CO1: Summarize the overview of human resource Management.

CO2: Relate the objectives of Human Resource Planning its objectives.

CO3: Discover the concept of HRD its different objectives etc.

CO4: Elaborate the emerging areas of International Human Resource Management.

CO5: Students will apply the theoretical approach in practical field.

Sl	Course content	Mapped modules	Hour allotted
CO1	Human Resource Management-Overview Introduction of the paper, Definition of Human Resource, Definition & Concept of Personnel Management, Comparison between Personnel Management & HR. Nature, Aim and Objectives, Scope & Coverage & Nature of HRM, Importance of Human Resource Management. Historical Perspective & Evolution of Human Resource Management in India. Development of HR Functions, Structure & Function of HR Manager, Role of Line Managers in Managing Human Resources. Difference Between Line Function and Staff Function. Changing Function of Human Resource Management with Examples.	M1	8
CO2	Human Resource Planning Meaning, Objectives, Importance of Human Resource Planning, Need for HR Planning, Assessment of Available HR in the Organization, Work Load Analysis, Manning Norms, Demand Analysis of Future Requirement of HR, HR Policy	M2	6
CO3	Job Analysis: Concept, Uses, Job Description, Job Specification, Methods of collecting Job Analysis Data, Job Evaluation.	M3	8
CO4	Talent Acquisition and Training: Recruitment: Definition, Sources of Selection, Process of Selection, Difference Between Recruitment and Selection. Training: Definition, Difference between Training, Development and Education, Different Methods of Training, Training needs assessment – KIRK-PATRICK, CIPO, CIRO, Training calendar	M4	7
CO5	HRD: Definition, objective, process of HRD, Assessment of HRD Needs, HRD Methods	M5	5

CO6	Introduction to Performance appraisal: Purpose, Methods, Appraisal instruments, 360-degree Appraisal, HR Score Card, Errors in appraisal, Potential Appraisal, Appraisal Interview. Compensation Management – Calculation of wage and salary (only theory)	M6	6

Learning Outcome/ Skills:

Now a day every organization is having complex organization structures. Student will study how different departments and functions within an organization interacts, and how the organizational structure affects decision-making and efficiency.

Module Number	Content	Total Hours	% of questions	Bloom Level (applicable)	Remarks, if any
THEORY					
M1	Human Resource Management-Overview	8	**20**	**1,2**	**NA**
M2	Human Resource Planning	6	**20**	**1,2,3**	**NA**
M3	Job Analysis: Concept, Uses, Job Description, Job Specification, Methods of collecting Job Analysis Data, Job Evaluation.	8	**20**	**1,2**	**NA**
M4	Talent Acquisition and Training	7	**10**	**1,2,3**	**NA**
M5	HRD: Definition,	5	**10**	**1,2,3**	**NA**
M6	Introduction to Performance appraisal	6	**20**	**1,2,3**	**NA**
Total Theory		**40**	**100**		
TUTORIAL		**8**			
TOTAL		**48**			

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Course Name: Corporate Social Responsibility
MIM-401B (Minor)

Mode: Offline **Credits: 4(3L+1T)**

Aim of the course: It provides students with a comprehensive understanding of the concept of corporate social responsibility, including its evolution, theoretical foundations, and key principles such as ethical behavior, accountability, transparency, and stakeholder engagement.

Course Objectives: students will be equipped with the knowledge, skills, and mind set necessary to understand, analyze, and address the complex challenges and opportunities associated with CSR and sustainable business practices.

Goals:

CO1: Educate students about the importance of ethical behavior in business and the role of CSR in promoting integrity, transparency, and accountability.

CO2: Raise awareness among students about social and environmental issues and their impacts on society, the economy, and the environment.

CO3: Foster a sense of responsibility and citizenship among students, encouraging them to make informed and ethical decisions that consider the interests of all stakeholders.

CO4 Provide opportunities for students to develop leadership and collaboration skills by working on CSR projects and initiatives that address real-world challenges.

CO5: Encourage students to become active participants in their communities, advocating for social and environmental causes and promoting positive change through grassroots initiatives.

Sl	Course content	Mapped Module	Hours allotted
CO1	Meaning and Definition of CSR, History and Evolution of CSR, Factors affecting the growth of CSR Reasons for Social Responsibility CSR activities – Nature, types, impact on development programme Corporate responsibility towards various group of stakeholders Chronological evolution of CSR in India Arguments in favour and Against of Corporate Social Responsibility	M1	5
CO2	Corporate Governance: Introduction, Historical Background Factors behind the origin of Corporate Governance, Important issues and Need of Corporate Governance, SEBI Code of Corporate Governance, Corporate Governance in India, Global issues in corporate Governance.	M2	8
CO3	International framework for corporate social Responsibility, Millennium Development goals, Sustainable development goals, Relationship between CSR and MDGs.United Nations (UN) Global Compact 2011. UN guiding principles on business and human rights.OECD CSR policy tool, ILO tri-partite declaration of principles on multinational enterprises and social policy	M3	7
CO4	CSR-Legislation In India & the world. Section 135 of Companies Act 2013.Scope for CSR Activities under Schedule VII, Identifying key stakeholders of CSR & their roles. Role of Public Sector in Corporate, government programs that encourage voluntary responsible action of corporations. Role of Non-profit	M4	7

	&Local Self Governance in implementing CSR; Contemporary issues in CSR & MDGs. Global Compact Self-Assessment Tool, National Voluntary Guidelines by Govt. of India. Understanding roles and responsibilities of corporate foundations.		
CO5	Current trends: Review Current Trends and Opportunities in CSR, CSR as Strategic business tool for sustainable development, Review of successful corporate initiatives and challenges of CSR,	M5	3

Learning Outcome/ Skills:

1. **Understanding of CSR Concepts and Principles**:

Define and explain the concept of CSR, including its evolution, theoretical foundations, and key principles such as sustainability, ethics, and stakeholder engagement.

2. **Critical Thinking and Analysis**:

Analyze and evaluate complex social, environmental, and ethical issues related to business operations and decision-making, applying critical thinking skills to assess their implications and identify potential solutions.

3. **Stakeholder Engagement and Management**:

Develop strategies for effective stakeholder engagement, communication, and relationship management in CSR initiatives.

4. **Ethical Decision Making**:

Understand ethical theories and frameworks and apply them to real-world business scenarios to make ethically sound decisions.

5. **Sustainability Literacy**:

.Apply sustainability principles to analyze business practices and develop strategies for sustainable development.

6. **Project Management and Implementation**:

Plan, execute, and evaluate CSR projects and initiatives, demonstrating skills in project management, resource allocation, and performance measurement.

7. **Communication and Advocacy**:

Advocate for CSR principles and practices within organizations and communities, promoting awareness and engagement.

8. **Global Perspective and Cross-Cultural Competence**:

Understand the global dimensions of CSR and the cultural, political, and economic factors that influence CSR practices in different regions.

9. **Risk Management and Compliance**:

Develop strategies to mitigate risks and ensure compliance with relevant laws, regulations, and industry standards.

Measurement and Reporting:Utilize tools and frameworks for measuring and evaluating CSR performance, including CSR reporting standards (e.g., GRI, SASB) and impact assessment methodologies.

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Module Number	Content	Total Hours	% of questions	Bloom Level (applicable)	Remarks, if any
M1	Basic concept of CSR	5	20%	1,2	NA
M2	Corporate Governance	8	30%	1,2,3	NA
M3	International framework for corporate social Responsibility	7	20%	1,2,3	NA
M4	CSR-Legislation In India & the world.	7	10%	1,2,3	NA
M5	Current trends	3	20%	2,3	NA
Total Theory		30	100		
Tutorial		8			
Total		38			

Paper code: MIM402A

Mode: Offline **Credits: 4(3L+1T)**

Maulana Abul Kalam Azad University of Technology, WB
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SALES AND DISTRIBUTION MANAGEMENT

Aim of the Course: The objective is to attain a comprehensive understanding of management.

Course Objectives: The course is designed to foster comprehension of the core Sales and distribution Management. It also covers operational aspects. Upon finishing this course, students should have a grasp of the foundational tenets of Sales & Distribution Management.

Goals:

After the completion of this course the students will be able to -

CO1: Summarize the overview of Sales and Distribution Management.

CO2: Relate the objectives of Sales and Distribution Management its relation with Personal Selling.

CO3: Discover the concept and art of Planning and Organizing Sales Force Efforts.

CO4: Students can explain Sales Force Management, Recruitment and Selection and Training and Development.

CO5: students can have the idea of Directing the Sales Force and Controlling of same.

CO6: Students can have the idea introduction, objective, advantages and types of marketing channel

CO7: Elaborate the Channel design decision and Channel Management Design.

CO8: Students will apply the theoretical approach in practical field.

Sl	Course content	Mapped modules	Hour allotted
CO1	**Introduction to Sales Management:** Evolution of sales department, Nature & scope of personal selling & sales management, Roles and functions of a sales manager.	M1	2
CO2	**Personal Selling:** Types of selling situations, Buyer-seller dyad, Theories of selling, Personal selling process (pre-approach, approach, presentation, handling objections, closing a sale, follow-up), Salesmanship – characteristics of good sales person.	M2	6
CO3	**Planning and Organizing Sales Force Efforts:** Strategic planning and sales organization, Sales department relations, Distribution network relations, Sales forecasting, Sales budget, Sales objectives, Sales territories and quotas.	M3	6
CO4	**Sales Force Management**: Different personnel functions of a sales manager, Quantitative and qualitative requirements of sales force planning – determination of sales force size, job analysis for type of sales people required. **Recruitment and Selection:** Sources of recruitment, Selection process, Methods of selection. **Training and Development:** Need and purpose of training, Types of training, Designing a training programme - ACMEE model.	M4	9
CO5	**Directing the Sales Force:** Supervision, Territory management, Determination of quota/target, Determination of compensation of sales force, Leading and Motivating.	M5	6

	Controlling: Analysis of sales, Costs and Profitability, Evaluation of sales force performance.		
CO6	**Marketing Channels:** Structure, Functions and advantages, Types of channel intermediaries – wholesalers, distributors, stockists, sales agents, brokers, franchisers, C&F agents, and retailers.	M6	4
CO7	**Channel Design and management:** Channel objectives & constraints, Identification, evaluation and selection of channel alternatives, Channel management and control – recruiting and selecting channel members, motivating, evaluating channel arrangements.	M7	4
CO8	**Physical Distribution & Logistics:** Goals, function, processing, warehousing, inventory & Transportation.	M8	3

Learning Outcome/ Skills:

Now a day every organization is having complex organization structures. Student will study how different departments and functions within an organization interacts, and how the organizational structure affects decision-making and efficiency.

Module Number	Content	Total Hours	% of questions	Bloom Level (applicable)	Remarks, if any
THEORY					
M1	**Introduction to Sales Management**	2	**5**	**1,2**	**NA**
M2	**Personal Selling**	6	**15**	**1,2,3**	**NA**
M3	**Planning and Organizing Sales Force Efforts**	6	**15**	**1,2**	**NA**
M4	**Sales Force Management** **Recruitment and Selection** **Training and Development**	9	**25**	**1,2,3**	**NA**
M5	**Directing and Controlling** **of sales Force**	6	**15**	**1,2,3**	**NA**
M6	**Marketing Channels**	4	**10**	**1,2,3**	**NA**
M7	**Channel Design and management**	4	**10**	**1,2**	**NA**

M8	**Physical Distribution & Logistics**	3	**5**	**1,2**	**NA**
Total Theory		**40**	**100**		
TUTORIAL		**8**			
TOTAL		**48**			

Course Name: E-Commerce
MIM-402B(Minor)

Mode: Offline **Credits: 4(3T+1T)**

Aim of the course: The aim of an E-Commerce course is to provide students with a comprehensive understanding of electronic commerce and its various components, applications, and implications in today's digital economy.

Course Objectives: students will be equipped with the knowledge, skills, and competencies needed to navigate the dynamic and competitive landscape of e-commerce and pursue careers in various e-commerce-related roles.

Goals:

CO1: Define electronic commerce (e-commerce) and its various forms and applications.

CO2: Analyze different e-commerce business models, such as B2C, B2B, C2C.

CO3: Explore the technological infrastructure and tools required to support e-commerce operations, including website development platforms, payment gateways, and content management systems.

CO4: Understand how to develop and implement effective marketing campaigns to attract and retain customers.

CO5: Understand the legal and regulatory frameworks governing e-commerce, including consumer protection laws, privacy regulations, and intellectual property rights.

Sl	Course content	Mapped Module	Hours allotted
CO1	Introduction to ecommerce: Meaning and concept of ecommerce, ecommerce vs e-business, advantages and disadvantages of ecommerce, value chain in ecommerce, Porter's value chain model, competitive advantage and competitive strategy, different types of ecommerce like B2B, B2C, C2C, C2B,G2C Technology in ecommerce: An overview of the internet, basic network architecture and the layered model, internet architecture, network hardware and software considerations, intranets and extranets,The making of world wide web, web system architecture, ISP, URL's and HTTP, cookies.	M1	5

CO2	Building and hosting your website: choosing an ISP, registering a domain name, web promotion, internet marketing techniques, e-cycle of internet marketing, personalization, mobile agents, tracking customers, customer service, CRM and e-value Web page design using HTML and CSS: Overview of HTML, basic structure of an HTML document, basic text formatting, links, images, tables, frames, form and introduction to CSS.	M2	8
CO3	Security threats: Security in cyberspace, kinds of threats and crimes: client threat, communication channel threat, server threat, other programming threats, frauds and scams Basic cryptography for enabling security in ecommerce: encryption: public and private key encryption, authentication and trust using digital signature and digital certificates, internet security using VPN, firewalls, SSL Internet payment systems: Features of payment methods, 4C payment methods, electronic money, ACID and ICES test, payment gateway, SET protocol for credit card payment, electronic payment media: ecash and e-wallet, e-check, credit card, debit card, smart card, EFT and ACH, Cyber security.	M3	7
CO4	Business to Business e-commerce: Meaning, benefits and opportunities in B2B, B2B building blocks and their relationship to supply chain management, key B2B models and their main functions, EDI as a B2B tool. Consumer oriented e-commerce: traditional retailing and e-retailing, benefits and key success factors for e-retailing, models for e-retailing like specialized and generalized e-stores, e-mall, direct selling by manufacturer, supplementary distribution channel, e-broker and e-services like web-enabling services, matchmaking services, information selling on the web, entertainment services and auction services.	M4	8
CO5	E-core values: ethical issues, legal issues, taxation issues and international issues.	M5	2

Learning Outcome/ Skills:

1. **Understanding of E-Commerce Concepts and Principles**:

Define and explain the concept of e-commerce and its significance in the digital economy.

2. **Website Development and Design Skills**:

Develop practical skills in designing and developing e-commerce websites using various platforms and tools.

3. **Digital Marketing and Promotion**:

- Gain knowledge of digital marketing strategies and techniques tailored for e-commerce, such as search engine optimization (SEO), social media marketing, email marketing, and content marketing.

4. **E-Commerce Payment Systems and Security**:

Learn about security measures and protocols to protect e-commerce transactions and customer data from cyber threats and fraud.

5. **Inventory Management and Supply Chain Operations**:

Understand strategies for optimizing inventory levels, managing order fulfillment, and improving shipping and delivery logistics.

6. **Customer Relationship Management (CRM)**:

- Learn how to effectively manage customer relationships and provide excellent customer service in the e-commerce context.

7. **Data Analytics and Performance Measurement**:

Gain skills in interpreting data insights and making data-driven decisions to optimize e-commerce operations and marketing strategies.

8. **Legal and Ethical Considerations**:

Develop ethical awareness and adhere to best practices in e-commerce business operations, data management, and customer privacy.

9. **Adaptability and Innovation**:

Develop adaptability and innovation skills to respond to changing market dynamics and customer preferences in the rapidly evolving e-commerce landscape.

10. **Entrepreneurship and Business Acumen**:

Develop strategic thinking, problem-solving, and decision-making skills to identify opportunities, mitigate risks, and drive business growth in the e-commerce sector.

Module Number	Content	Total Hours	% of questions	Bloom Level (applicable)	Remarks, if any
M1	Introduction to ecommerce	5	20%	1,2	NA
M2	Building and hosting your website	8	30%	1,2,3	NA
M3	Security threats	7	20%	1,2,3	NA
M4	Business to Business e-commerce	8	10%	1,2,3	NA
M5	E-core values	2	20%	2,3	NA
Total Theory		30	100		
Tutorial		8			
Total		38			

Maulana Abul Kalam Azad University of Technology, WB
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Paper Name: FINANCIAL MANAGEMENT

Paper code: MIM501:

Mode: Offline **Credits: 4**

Aims of the course: The objective is to attain a comprehensive understanding of the basics of Financial Management and its application

Course Objectives:
Upon finishing this course, students should have a grasp of the foundational tenets of Marketing Management. Course Outcomes:

CO1: This course equips students with foundational knowledge in Financial Management.

CO2: Through this course, students will know the fundamentals of a Financial plan.

CO3: The course will facilitate active learning and acquiring knowledge regarding emerging Financial management trends.

CO4: The course is designed to furnish students with decision-making skills relevant to Financial management

CO5: Upon completing this course, students will be equipped to find solutions to Financial challenges and explore possibilities in practical settings.

Sl	Course content	Mapped Module	Hours allotted
CO1	**Introduction:** Concepts, Nature, Scope, Function and Objectives of Financial Management. Basic Financial Decisions: Investment, Financing and Dividend Decisions. **Financial goals** - Profit vs. Wealth Maximization; Finance Functions – Investment, Financing and Dividend Decisions – Cost of Capital – Significance of Cost of Capital – Calculation of Cost of Debt – Cost of Preference Capital – Cost of Equity Capital (CAPM Model and Gordon's Model) and Cost of Retained Earnings – Combined Cost of Capital (weighted/Overall).	M1	6
CO2	**Analysis and Interpretation of Corporate Final Accounts**: Understanding the Parameters of health of Business: Liquidity, Profitability, Solvency and Efficiency through learning computation, analysis and interpretation of various tools of financial analysis Preparation of Cash Flow Statement as per Accounting Standard and its Analysis	M2	6
CO3	**Capital Budgeting** – Nature of Investment Decisions – Investment Evaluation criteria – Net Present Value (NPV), Internal Rate of Return (IRR), Profitability Index (PI), Payback Period, Accounting Rate of Return (ARR) – NPV and IRR comparison.	M3	4
CO4	**Leverage Analysis:** Developing the Concept of Leverage in Finance. Computation and inferences of Degree of Operating Leverage, Financial Leverage and Combined Leverage – Measurement of Leverages – Effects of Operating and Financial Leverage on Profit – Analyzing Alternate Financial Plans - Capital Structure Theories - Traditional approach - M.M. Hypotheses – without Taxes and with Taxes – Net Income Approach (NI) – Net Operating Income Approach	M4	6

	(NOI) - Determining capital structure in practice.		
CO5	**Investment Decisions**: Analysis of Risk and Uncertainty. Concept and Computation of Time Value of Money, DCF and Non DCF methods of Investment Appraisal. Project selection on the basis of Investment Decisions. Valuating Investment Proposals for Decision Making. Capital Rationing	M5	6
CO6	**Dividend Policies** – Issues in Dividend Decisions – Relevance Theory – Walter's Model – Gordon's Model – Irrelevance Theory – M-M hypothesis - Dividend Policy in Practice – Forms of Dividends – Stability in Dividend Policy – Corporate Dividend Behaviour.	M6	6
CO7	**Management of Working Capital:** Concepts, components, Determinants, need, Significance and types of Working Capital – Calculating Operating Cycle Period and Estimation of Working Capital Requirements – Financing of Working Capital and norms of Bank Finance – Sources of Working capital – Factoring services– Various committee reports on Bank Finance – Dimensions of Working Capital Management, Computation of Working Capital for a Company.	M7	6

Learning Outcome/ Skills:

Now a day's business organization is complex with intricate structures. Students have to study how financial allocation to be done and understand the tools of finance departments and functions in a complex environment. Students must be aware about its implication to the business and macro environment as well. They must understand effects of Financial management in decision-making and efficiency.

Module Number	Content	Total Hours	% of questions	Bloom Level (applicable)	Remarks, if any
THEORY					
M1	**Introduction: Concepts, Nature, Scope, Function and Objectives of Financial Management.**	6	**15**	**1,2**	**NA**
M2	**Analysis and Interpretation of Corporate Final Accounts**	6	**15**	**1,2,3**	**NA**
M3	**Capital Budgeting**	4	**10**	**1,2**	**NA**
M4	**Leverage Analysis:**	6	**15**	**1,2,3**	**NA**
M5	**Investment Decisions**	6	**15**	**1,2,3**	**NA**
M6	**Dividend Policies**	6	**15**	**1,2,3**	**NA**
M7	**Management of Working Capital:**	6	**15**	**1,2,3**	**NA**
Total Theory		**40**	**100**		
TUTORIAL		**8**			
TOTAL		**48**			

BOOKS:

1. **"Financial Management: Theory and Practice"** by Prasanna Chandra
2. **"Financial Management"** by I. M. Pandey
3. **"Financial Management: Principles and Applications"** by S. N. Maheshwari
4. **"Strategic Financial Management"** by Ravi M. Kishore
5. **"Financial Management: Text, Problems and Cases"** by M. Y. Khan and P. K. Jain.

Course Name: Entrepreneurship
MIM 502

Mode: Offline **Credits: 4**

Aim of the Course: The aim of a course in entrepreneurship typically focuses on equipping students with the knowledge, skills, and mind set necessary to start, manage, and grow their own business ventures.
Course Objectives: The course objectives for entrepreneurship are to equip students with the knowledge and skills necessary to identify and evaluate business opportunities, develop comprehensive business plans, and understand the financial, legal, and ethical aspects of launching and managing a startup. Students will enhance their innovation, creativity, and leadership abilities, while also learning effective marketing, communication, and risk management strategies. The course aims to prepare students to confidently navigate the challenges of entrepreneurship, whether by starting their own ventures or applying entrepreneurial thinking within existing organizations.

Goals:

CO1: Students will be able to create a comprehensive and viable business plan, incorporating market research, financial projections, and operational strategies, demonstrating their readiness to launch a new venture.

CO2: Student will demonstrate the ability to identify, evaluate, and select profitable business opportunities, using analytical tools and techniques to assess market needs and potential risks.

CO3: Students will acquire the skills to manage the financial aspects of a startup, including budgeting, fundraising, cash flow management, and financial statement analysis, ensuring the financial sustainability of their venture.

CO4: Students will showcase their ability to apply innovative thinking and problem-solving skills to overcome challenges in the entrepreneurial process, developing unique solutions that add value to their business.

CO5: Students will be able to make informed and ethical business decisions, considering legal implications, social responsibility, and long-term strategic goals in the management of their entrepreneurial ventures.

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SI	Course Content	Mapped Module	Hours allotted
CO1	**Introduction to Entrepreneurship:** Meaning and concept of entrepreneurship, The history of entrepreneurship development, Factors influencing entrepreneurship, Theories of Entrepreneurship, Role and Importance of Entrepreneurship in Economic Growth, New generations of entrepreneurship viz. social entrepreneurship, Health entrepreneurship, Tourism entrepreneurship, Women entrepreneurship etc., Creativity and entrepreneurship, Steps in Creativity, Barriers to entrepreneurship	M1	10
CO2	**Introduction to entrepreneur:** meaning and concept of entrepreneur, types of entrepreneur,Characteristics of Entrepreneurs, Functions of entrepreneur	M2	6
CO3	**Entrepreneurial Motivation:** Entrepreneurial Motivation, Need for Achievement Theory, Maslow's theory, Herjburg's theory, McGragor's Theory, Risk-taking Behavior, Innovation and Entrepreneur	M3	7
CO4	**Project Management:** Ideas – Sources, processing; Input Requirements, Sources of Financing, Technical Assistance, Marketing Assistance, Preparation of Feasibility Reports, Legal Formalities and Documentation.	M4	7
CO5	**Organisation Assistance** Assistance to an entrepreneur, New Ventures Industrial Park (Meaning, features, & examples), Special Economic Zone (Meaning, features & examples),Financial assistance by different agencies MSME, The Small Industries Development Bank of India(SIDBI),The State Small Industries Development Corporation(SSIDC)	M5	10

Learning Outcomes / Skills for Entrepreneurship Course
By the end of this course, students will have developed the following skills and competencies:

1. Entrepreneurial Mindset:
Develop the ability to think creatively and innovatively, identifying opportunities in various market conditions.

2. Opportunity Recognition:
Acquire the skills to identify, assess, and evaluate potential business opportunities in different industries.

3. Business Planning:
Demonstrate proficiency in creating comprehensive business plans, including executive summaries, marketing strategies, and financial projections.

4. Market Analysis:
Gain the ability to conduct thorough market research and analysis to understand customer needs, competition, and market dynamics.

5. Financial Literacy:
Develop a solid understanding of financial statements, budgeting, and cash flow management essential for managing a startup.

6. Risk Management:
Learn how to identify potential risks in a business venture and develop strategies to mitigate them.

7. **Leadership and Team Building**:
Cultivate leadership skills necessary for building and managing a diverse and effective team in a startup environment.

8. Legal and Ethical Awareness:
Understand the legal frameworks and ethical considerations involved in starting and running a business, including intellectual property rights and corporate social responsibility.

9. Pitching and Presentation Skills:
Enhance communication and presentation skills, enabling students to pitch their business ideas effectively to potential investors and stakeholders.

10. Growth Strategies:
Learn the strategies for scaling a business, managing growth, and sustaining long-term success in a competitive market.

Module Number	Content	Total Hours	% of questions	Bloom Level (applicable)	Remarks, if any
M1	**Introduction to Entrepreneurship**	10	30%	1,2	NA
M2	**Introduction to entrepreneur**	6	20%	1,2,3	NA
M3	**Entrepreneurial Motivation**	7	10%	1,2,3	NA
M4	**Project Management**	7	20%	1,2,3	NA
M5	**Organisation Assistance**	10	20%	2,3	NA
Total Theory		40	100		
Tutorial		8			
Total		48			

Books:

1. **Entrepreneurship – Anindita Sarkar – Taurean Publications**
2. **Entrepreneurship Development and Project Management – Dr. Dilip M. Sarwate – Everest Publishing House**

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Paper Name: CUSTOMER RELATIONSHIP MANAGEMENT

Paper code: MIM601:

Mode: Offline **Credits: 4**

Aims of the course: The objective is to attain a comprehensive understanding of the basics of Customer Relationship Management and its application

Course Objectives:
The course focuses on helping in recognizing the key elements need to be addressed and reflects the need to create an integrated cross-functional focus - one that emphasizes retaining as well as winning customers:

Course Outcomes:
CO1: To be aware of the nuances of customer relationship

CO2: To analyse the CRM link with the other aspects of marketing

CO3: To impart the basic knowledge of the Role of CRM in increasing the sales of the company

CO4: To make the students aware of the different CRM models in service industry

CO5: To make the students aware and analyse the different issues in CRM

Sl	Course content	Mapped Module	Hours allotted
CO1	**Evolution of Customer Relationship Management**, CRM- Definition, Emergence of CRM Practice, Factors responsible for CRM growth, CRM process, framework of CRM, Benefits of CRM, Types of CRM, Scope of CRM, Customer Profitability, Features Trends in CRM , CRM and Cost-Benefit Analysis, CRM and Relationship Marketing.	M1	6
CO2	**CRM Concepts, Customer Value**, Customer Expectation, Customer Satisfaction, Customer Centricity, Customer Acquisition, Customer Retention, Customer Loyalty, Customer Lifetime Value. Customer Experience Management, Customer Profitability, Enterprise Marketing Management, Customer Satisfaction Measurements, Web based Customer Support.	M2	8
CO3	**Planning for CRM** Steps in Planning-Building Customer Centricity, Setting CRM Objectives, Defining Data Requirements, Planning Desired Outputs, Relevant issues while planning the Outputs, Elements of CRM plan, CRM Strategy: The Strategy Development Process, Customer Strategy Grid.	M3	6
CO4	**CRM and Marketing Strategy**: CRM Marketing Initiatives, Sales Force Automation, Campaign Management, Call Centres. Practice of CRM: CRM in Consumer Markets, CRM in Services Sector, CRM in Mass Markets, CRM in Manufacturing Sector.	M4	10
CO5	**Implementation of CRM:** Issues and Problems in implementing CRM, Information Technology tools in CRM, Challenges of CRM Implementation. CRM Implementation Roadmap, Road Map (RM) Performance: Measuring CRM performance, CRM Metrics.	M5	10

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Learning Outcome/ Skills:

- **Understanding CRM Concepts**: Students will develop a clear understanding of CRM principles, frameworks, and its importance in building long-term customer relationships.
- **Customer Segmentation and Targeting**: Ability to analyse customer data to segment and target different customer groups effectively based on their behaviour and preferences.
- **CRM Technologies**: Knowledge of various CRM tools and software used to manage and analyse customer interactions, and how to leverage them for better customer insights and engagement.
- **Customer Retention Strategies**: Learn techniques to improve customer satisfaction and loyalty, and strategies to retain customers over time.
- **Data-Driven Decision Making**: Ability to use customer data for informed decision-making, focusing on enhancing customer experience and optimizing marketing efforts.
- **Enhancing Business Performance**: Understanding how effective CRM practices contribute to improved business performance, increased profitability, and customer lifetime value.
- **Problem-Solving Skills**: Developing skills to address customer issues and complaints effectively, fostering trust and maintaining strong customer relationships.
- **Impact on Business Strategy**: Understanding the role of CRM in aligning customer-centric strategies with overall business objectives.

Module Number	Content	Total Hours	% of questions	Bloom Level (applicable)	Remarks, if any
THEORY					
M1	**Evolution of Customer Relationship Management**	6	**15**	**1,2**	**NA**
M2	**CRM Concepts, Customer Value**	8	**20**	**1,2,3**	**NA**
M3	**Planning for CRM**	6	**15**	**1,2**	**NA**
M4	**CRM and Marketing Strategy**	10	**25**	**1,2,3**	**NA**
M5	**Implementation of CRM**	10	**25**	**1,2,3**	**NA**
Total Theory		**40**	**100**		
TUTORIAL		**8**			
TOTAL		**48**			

Reference Books:

1. Customer Relationship Management: Anis Chattopadhyay – Taurean Publications

2. Jagdish N.Sheth, Atul Parvatiyar & G.Shainesh, “Customer Relationship Management”, Emerging Concepts, Tools and Application”, 2010, TMH.

3. Dilip Soman & Sara N-Marandi,” Managing Customer Value” 1st edition, 2014, Cambridge.

4. Alok Kumar Rai, “Customer Relationship Management: Concepts and Cases”, 2008, PHI.

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Course Name: Career Planning and Management
MIM 602A

Mode: Offline **Credits: 4**

Aim of the Course: The aim of this course is to equip students with a comprehensive understanding of career planning and management, enabling them to make informed career decisions and develop the necessary skills to achieve professional growth and success.

Course Objectives:
- To introduce students to the fundamentals of career planning, including career anchors and personality typology.
- To help students identify and develop behavioural traits essential for workplace success.
- To guide students through the process of researching and selecting career options based on company preferences and job profiles.
- To explore various theories and models of career development, including strategies for decision-making and managing life roles in career growth.

Goals:

- **CO1:** Students will gain a foundational understanding of career planning, including career anchors, behavioural models, and personality types.
- **CO2:** Students will learn to identify key behavioural traits such as adaptability, leadership, and communication, and understand their impact on organizational culture and career success.
- **CO3:** Students will acquire skills in researching company profiles, understanding company functions, resume building, and interview preparation.
- **CO4:** Students will develop a comprehensive understanding of career development theories, decision-making strategies, and the relationship between work and other life roles.

SI	Course Content	Mapped Module	Hours allotted
CO1	**INTRODUCTION TO CAREER PLANNING** Define the starting point, career anchors, behavioural models, personality typology	M1	4
CO2	BEHAVIOURAL TRAITS **Identification of Behavioral Traits ,** Understanding key traits such as adaptability, leadership, and communication , organizational culture, fostering teamwork and enhancing workplace harmony, **Corporate Competencies** , problem-solving with competencies that drive career success and organizational performance.	M2	10
CO3	**CHOOSING YOUR CAREER** Researching and Clarifying Company Preferences, Creating a Company Profile, Making Contact with Companies, Understanding Company Functions, and	M3	6

	Developing the Resume , preparing yourself for interview		
CO4	CAREER DEVELOPMENT Theories and Models of Career Development, Career Counseling and Decision-Making, Conceptualizing the Interrelationships Among Work, Mental Wellbeing, Relationships, and Other Life Roles, Utilizing Career and Vocational Information Resources, Technologies, and Systems, Strategies for Career Development Program Planning, Organization, Implementation, and Administration	M4	10

Learning Outcomes / Skills for Intellectual Property Rights Course

By the end of this course, students will have developed the following competencies:

1. Career Planning and Self-Assessment:

Students will be able to assess their career anchors, personality traits, and align them with career goals.

2. Behavioural Traits and Workplace Integration:

They will recognize behavioural traits that foster a better cultural fit and enhance teamwork and organizational performance.

3. Job Search Skills:

Students will develop the ability to research, prepare resumes, and communicate effectively during interviews.

4. Career Development Knowledge:

They will understand career counselling theories and their application in managing work-life balance and career progression.

Module Number	Content	Total Hours	% of questions	Bloom Level (applicable)	Remarks, if any
M1	**INTRODUCTION TO CAREER PLANNING**	4	20%	1,2	NA
M2	BEHAVIOURAL TRAITS	10	30%	1,2,3	NA
M3	**CHOOSING YOUR CAREER**	6	20%	1,2,3	NA
M4	CAREER DEVELOPMENT	10	30%	2,3,4	NA
Total Theory		30	100		
Tutorial		10			
Total		40			

Books:

1. **Career Planning and Management –** Souvik Ghosh, Krishnarup Chaudhuri, Saswata Kanjilal – Taurean Publications.

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Course Name: Managing workplace Diversity
MIM 602B

Mode: Offline **Credits: 4**

Aim of the Course: The aim of the course is to empower students with the essential skills and knowledge to effectively identify, assess, and seize business opportunities and determinations . The course focuses on equipping students with the ability to recognize emerging trends, conduct thorough market research, and evaluate the feasibility of potential business ideas. It also emphasizes the importance of innovation, adaptability, and strategic planning in transforming opportunities into successful and sustainable business ventures.

Course Objectives: The course objectives are to equip students with the skills and knowledge to identify and evaluate potential business opportunities across different markets. Students will learn to conduct in-depth market research and its behaviour , assess the feasibility and financial viability of business ideas, and understand the role of innovation in opportunity exploration. The course also aims to develop students' ability to adapt diversity management, to create and maintain a positive work environment where the similarities and differences of individuals are valued, so that all can reach their potential and maximize their contributions to an organization's strategic goals and objectives.

Course Objective:

Diversity management is a process intended to create and maintain a positive work environment where the similarities and differences of individuals are valued. The literature on diversity management has mostly emphasized on organization culture; its impact on diversity openness; human resource management practices; institutional environments and organizational contexts to diversity-related pressures, expectations, requirements, and incentives; perceived practices and organizational outcomes related to managing employee diversity; and several other issues.

SL.	COURSE CONTENT	Mapped Module	Hours allotted
CO1	• Introduction • Diversity in Relation to Culture and Performance • Diversity: Affirmative Action and Creativity • Classification , advantages and disadvantages	M1	10
CO2	• New Perspectives and Strategies in Managing Diversity Approaches to work motivation Theories of Motivation • Major Findings and Discussion • Interpersonal Relationships • Human rights • Challenges	M2	10

CO3	• Personality – meaning of Personality, detainment of Personality, theory of personality, Measurement of personality, development of personality. • Classification , advantages and disadvantages • Human Difference, Social Justice and Inclusion Issues • Religious Diversity • Mental & Physical Ability	M3	10
CO4	• Strategies Adopted to Enhance Workplace Diversity • Differences Across Gender and Their Perception About Strategy to Increase Inclusiveness • Theoretical Underpinnings and Literature Review on Workforce Diversity and Inclusion: Social Categorization Theory , Social Identity Theory , Strategic Choice Theory , Optimal Distinctiveness Theory	M4	10

Module Number	Content	Total Hours	% of questions	Bloom Level (applicable)	Remarks, if any
M1	**Introduction , classification , concept**	10	10%	1,2	NA
M2	**Perspective , motivation , Human rights, challenges**	10	20%	1,2,3	NA
M3	**Personality, differences , diversity, Dimensions**	10	20%	1,2,3	NA
M4	**Optimum outcome , implementation, concept and theories**	10	20%	2,3	NA
Total Theory		40	100		
Total		40			

Readings:

1. Arpita Saha, (2007) “Nurturing Cultural Diversities A Leadership Challenge” HRM Review .
2. Asmita Jha, (2009) "Need for Cross- Cultural Management" HRM Review ICFAI University Press .
3. Ashok Chanda, (Dec 2006) “Driving Diversity Management in India: HR’s Alienation” HRD News Letter Issue
4. Patricia A. Kreitz, (29 Jan 2008) “Best Practices for Managing Organizational Diversity” The Journal of Academic Librarianship, Volume 34, Number 2, pages 101–120.
5. Harold Andrew Patrick1 and Vincent Raj Kumar2 journal .
6. Sharbari Saha, Dewpha Mukherjee Patra, (2008) "Cross-cultural Issues Intricacies and Ignarance" HRM Review ICFAI University Press.

Maulana Abul Kalam Azad University of Technology, WB
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Course Name: Consumer Behaviour
MIM 701A

Mode: Offline **Credits: 4**

Aim of the Course:

The aim of the course is to empower students with the essential skills and knowledge to effectively identify, assess, and seize business opportunities in various markets. The course focuses on equipping students with the ability to recognize emerging trends, conduct thorough market research, and evaluate the feasibility of potential business ideas. It also emphasizes the importance of innovation, adaptability, and strategic planning in transforming opportunities into successful and sustainable business ventures.

Course Objectives: The course objectives are to equip students with the skills and knowledge to identify and evaluate potential business opportunities across different markets. Students will learn to conduct in-depth market research, assess the feasibility and financial viability of business ideas, and understand the role of innovation in opportunity exploration. The course also aims to develop students' ability to adapt to changing market conditions and apply various business models to capitalize on opportunities. By the end of the course, students will be prepared to strategically pursue and manage business opportunities, ensuring their ventures are competitive and sustainable.

Course Outcomes:

CO1 Discuss the rationale for studying consumer behavior.

CO2 Identify and explain factors which influence consumer behavior inclusive of society and culture.

CO3 Demonstrate how knowledge of consumer behavior can be applied to marketing.

CO4 To understand human Psychology associated with consumers while purchasing.

CO5 Develop communication skills associated with consumer behaviour and related models.

CO6 Demonstrate the capability to work both independently and in a team environment employing inquiry processes to solve the problems related to marketing.

SL.	COURSE CONTENT	Mapped Module	Hours allotted
CO1	**INTRODUCTION TO CONSUMER BEHAVIOUR**: Evolution of consumer behavior, understanding consumers and market segments, consumer behavior and marketing strategy, psychographic dimensions, consumer motivation, perception, personality, information processing, attitude formation and attitude change. Scope and their applications. Information search Process, Evaluative Criteria and Decision Rules, Building Customer satisfaction. 7 Os of consumer behaviour,	M1	8
CO2	**Factors affecting Consumer Behaviour** Factors influencing Consumer Behaviour– External Influences – Culture, Sub Culture, Social Class, Reference Groups, Family, Internal Influences– Needs & Motivations, Perception, Personality, Lifestyle, Values, Learning,	M2	2

	Memory, Beliefs & Attitudes.		
CO3	**SOCIAL AND CULTURAL ENVIRONMENT**: Economic, demographic, cross cultural and socio-cultural influences, Cultural relevance to marketing decisions, Characteristics of culture, Cultural Values, Cultural Changes, Cross cultural understandings social stratification, reference groups and family influences, personal influence. Family: Role & Structure, Family Life Cycle, Purchasing decisions, changing role of families. Role of Reference group, types of reference group.	M3	6
CO4	**Consumers' Need, Motivation, Personality, Perception and Learning** **Motivation**– Needs, Goals, Motive arousal, • Maslow Hierarchy of needs, • Alderfer's ERG Theory, • Herzberg motivation- Hygiene Theory, • McClelland's Achievement Theory • McGregor's Theory X and Y, • Vroom's Expectancy Theory. • Porter's Expectancy Theory, • Freud's Theory of Motivation , **Personality** – meaning and concept of Personality, determinant of Personality, theory of personality- Self-concept theory, Psychoanalytic Theory, Neo-Freudian Theory, Trait Theory, humanistic theory, social-cognitive theory. Measurement of personality, development of personality. **Perception:** **Definition and Importance:** Defining perception, its nature, and its significance in consumer behavior. • Th **Perceptual Process:** Exploring the stages of perception, including exposure, attention, organization, interpretation, and retention. • Elements of Perception: Examining factors like sensation, threshold, and perceptual biases. • Sensory Dynamics: Understanding how different senses (sight, sound, touch, smell, taste) influence consumer perception. • Barriers to Accurate Perception: Identifying factors that can distort or limit perception, such as selective attention and perceptual defense. Perception and Consumer Decision-Making: • Perception of Products and Brands: How consumers perceive products, brands, and their attributes. • Perception of Price: How consumers perceive value and make price-related decisions. • Perception of Risk: Understanding how consumers perceive risk and how it impacts their purchase decisions. • Perception and Advertising: How advertising messages are perceived and their impact on consumer attitudes and behaviors.	M4	12

	• Perceptual Mapping: Using perceptual maps to visualize consumer perceptions of different brands and products. • Subliminal Perception: Exploring the concept of subliminal messages and their potential influence on consumer behavior. • Consumer Imagery: Understanding how consumers form mental images of products and brands. **Learning:** Meaning, Definition, Concept. Relationship with Consumer Behaviour Theories of Learning: A) BEHAVIORAL LEARNING THEORY 1. Theory of CLASSICAL CONDITIONING (Stimulus-Response) 2. Cognitive Associative Learning (Memory/Trial-Error based) : 3. Operant or Instrumental Conditioning **(Result/Reinforcement based)** 4. Social Learning Theory B) Cognitive theories: 1. social cognitive theory, 2. cognitive behavioral theory, 3. and constructivism		
CO5	**Consumer Decision Making Process** Types of consumer decisions, Consumer Decision Making Process - Problem Recognition - Information Search - Alternative Evaluation –Purchase Selection – Post purchase Evaluation, Buying pattern in the new digital era. Four views of Consumer decision rules: Economic man, Passive man, Emotional man, Cognitive man. Models of Consumer Decision making, Nicosia Model.		6
CO6	**Marketing Communications, Decision Making Models, Consumer Rights** Marketing Communication Process, Types of Communication systems – Interpersonal, Impersonal, Persuasive Communication, Consumer Decision Making Models – Black Box Model - Economic model - Howard model, Howard- Sheth model, EKB model, Webster and wind model and Sheth industrial buyer behavior model., Consumer Protection Act 1986, rights of consumers.		6

Readings:

1. Consumer Behaviour – Anis Chattopadhyay- Taurean Publications
2. Consumer Behavior,. by Kumar Leon G., Schiffman;Joe, Wisenblit;S. Ramesh - Pearson Education India.
3. Consumer Behavior- by Schiffman - Pearson Education India.

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Module Number	Content	Total Hours	% of questions	Bloom Level (applicable)	Remarks, if any
M1	**INTRODUCTION TO CONSUMER BEHAVIOUR**	8	10%	1,2	NA
M2	**Factors affecting Consumer Behaviour**	2	10%	1,2,3	NA
M3	**SOCIAL AND CULTURAL ENVIRONMENT**	6	20%	1,2,3	NA
M4	**Consumers' Need, Motivation, Personality, Perception and Learning**	12	20%	2,3	NA
M5	**Consumer Decision Making Process**	6	20%	2,3	NA
M6	**Marketing Communications, Decision Making Models, Consumer Rights**	6	20%	1,2,3	NA
TOTAL THEORY		40	100%		
TUTORIAL		8			

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Course Name: Exploring Business Opportunity
MIM 701B

Mode: Offline **Credits: 4**

Aim of the Course: The aim of the course is to empower students with the essential skills and knowledge to effectively identify, assess, and seize business opportunities in various markets. The course focuses on equipping students with the ability to recognize emerging trends, conduct thorough market research, and evaluate the feasibility of potential business ideas. It also emphasizes the importance of innovation, adaptability, and strategic planning in transforming opportunities into successful and sustainable business ventures.

Course Objectives:The course objectives are to equip students with the skills and knowledge to identify and evaluate potential business opportunities across different markets. Students will learn to conduct in-depth market research, assess the feasibility and financial viability of business ideas, and understand the role of innovation in opportunity exploration. The course also aims to develop students' ability to adapt to changing market conditions and apply various business models to capitalize on opportunities. By the end of the course, students will be prepared to strategically pursue and manage business opportunities, ensuring their ventures are competitive and sustainable.

Goals:

CO1: Identify and Generate Business Opportunities
Develop the ability to recognize and create viable business opportunities by understanding market needs and emerging trends.

CO2: Conduct Thorough Market Analysis
Strengthen analytical skills to conduct comprehensive market research and assess the potential success of business opportunities.

CO3: Evaluate Feasibility and Financial Viability
Gain expertise in evaluating the feasibility of business ideas, including financial forecasting and risk assessment.

CO4: Adapt to Market Dynamics
Enhance the ability to adapt strategies based on changing market conditions, ensuring the sustainability of business ventures.

CO5: Develop Strategic Business Plans
Equip students with the skills to formulate and implement strategic business plans that include clear objectives, actionable strategies, and operational frameworks.

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SI	Course Content	Mapped Module	Hours allotted
CO1	**Business plan:** • Develop **detailed business plans** • Define **objectives and strategic approaches** • Prepare **financial forecasts and budgets** • Design **operational processes and structures**	M1	6
CO2	**Market analysis:** • **Business Categorization and Market Analysis** • **Environmental Analysis and Market Research** • **Demand and Resource Evaluation** • **Supply Chain Sourcing and Management** • **Strategic Challenges in New Ventures** • **Common Risks in Selecting New Business Opportunities** • **Key Success Factors in Developing New Ventures** • **Funding Options and Financial Challenges for Startups**	M2	10
CO3	**Market Assessment:** **Market Evaluation – Identifying Needs and Assessment Tools** • **Techniques for Conducting Market Surveys** • **Sources and Collection of Market Data** • **Preparing and Presenting Market Survey Reports**	M3	7
CO4	**Project Management:** • **Securing Project Funding** • **Importance and Purpose of a Business Plan** • **Assessing Market Viability.** • **Evaluating Technical Feasibility** • **Determining Financial Sustainability** • **Preparation of Comprehensive Project Reports**	M4	7
CO5	**Recognizing Business Opportunities:** • **Industrial Policy and Economic Development** • **Entrepreneurial Skill Enhancement** • **Business Incubation and Support Centers** • **Start-up Policy and Incentives**	M5	10

Learning Outcomes / Skills for Entrepreneurship Course

• Opportunity **Identification**: Ability to recognize and evaluate potential business opportunities in various industries and markets.

• Market **Research Skills**: Proficiency in conducting comprehensive market research to assess demand, competition, and customer needs.

• Creative **Thinking**: Development of innovative ideas and creative solutions to identify uique market gaps and opportunities.

• Risk **Analysis**: Capability to assess the risks associated with new business opportunities and devise strategies to mitigate them.

• Feasibility **Analysis**: Skill in evaluating the feasibility of business ideas through financial, operational, and market assessments.

 Business **Model Development**: Understanding of different business models and the ability to design a viable model for a new venture.

 Networking **Skills**: Ability to build and leverage professional networks to gather insights, resources, and support for exploring opportunities.

 Resource **Identification**: Competence in identifying and acquiring the necessary resources (financial, human, and technological) to pursue business opportunities.

 Pitching **and Presentation Skills**: Ability to effectively pitch business ideas to potential investors, partners, or stakeholders.

 Ethical **Consideration**: Understanding of the ethical implications of business decisions and their impact on society and the environment.

Module Number	Content	Total Hours	% of questions	Bloom Level (applicable)	Remarks, if any
M1	**Introduction to Entrepreneurship**	6	10%	1,2	NA
M2	**Market analysis**	10	30%	1,2,3	NA
M3	**Market Assessment**	7	20%	1,2,3	NA
M4	**Project Management**	7	20%	1,2,3	NA
M5	**Recognizing Business Opportunities**	10	20%	2,3	NA
Total Theory		40	100		
Tutorial		8			
Total		48			

Books:

1. Exploring Business Opportunity – Anindita Sarkar – Taurean Publications

Maulana Abul Kalam Azad University of Technology, WB
(Formerly known as West Bengal University of Technology)

Paper Name: STRATEGIC MANAGEMENT

Paper code: MIM702A:

Mode: Offline **Credits: 4**

Aims of the course: The objective is to attain a comprehensive understanding of the basics of Strategic Management and its application

Course Objective: The course focuses on acquainting the students with the nature, scope and dimensions of Business Policy and Strategy Management Process.

Course Outcomes:
CO1: To realize the basics of Business policies

CO2: To recognize the Strategic management

CO3: To Illustrate the Strategic Management in business

CO4: To analyse the Strategic Implementation and social responsibility

CO5: To outline the Strategy Evaluation and Control

Sl	Course content	Mapped Module	Hours allotted
CO1	**Strategic Management An Overview of Strategic management**: Understanding Strategy, Scope and importance of strategies , mission - vision - goals – objectives- defining and explaining strategy, Levels at which strategy operates, strategic decision making, the process of strategic management.	M1	6
CO2	**Strategy Formulation:** Environmental Scanning, SWOT analysis, Internal and External environmental analysis, Competition Analysis: Porter's Five Forces Theory, Generic strategies, Competitive Advantage, Value chain analysis, Mckinesey's 7s frame work, Balance Score card, BCG matrix, PESTLE Analysis.	M2	8
CO3	**Strategy Implementation:** Strategy Implementation: Organisational Structure – Analyzing, managing strategic change, issues in strategy implementation. Strategy Implementation: Behavioural Issues - Leadership, Corporate culture, social responsibilities and Ethics.	M3	6
CO4	**Strategy Evaluation and Control Designing Strategic Control System**: Functional Issues – Operational/Production, marketing, financial and human resource management and Environmental factors, Information for strategic control, Techniques of strategic Evaluation and control, implementing strategic control.	M4	10
CO5	**Business Policies:** Introduction, overview of Business Policies, Importance of Business Policies, Definition of Business Policy. ,Procedure , Process and Types of Policies, Factors Considered before framing Policies, Steps involved in framing Business Policies .	M5	10

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Paper Name: STRATEGIC MANAGEMENT

Paper code: MIM702A:

Mode: Offline **Credits: 4**

Learning Outcome/ Skills:

In today's complex business organizations with intricate structures, students need to learn how to plan, implement and evaluate strategic management in the organization and department as well. They should also be aware of the implications of strategic decision making on business and broader macroeconomic environment. Understanding the impact of strategic management on long term and short term decision-making and overall efficiency is crucial for them.

Module Number	Content	Total Hours	% of questions	Bloom Level (applicable)	Remarks, if any
THEORY					
M1	**Strategic Management An Overview of Strategic management**	6	**15**	**1,2**	**NA**
M2	**Strategy Formulation**	8	**20**	**1,2,3**	**NA**
M3	**Strategy Implementation**	6	**15**	**1,2**	**NA**
M4	**Strategy Evaluation and Control Designing Strategic Control System**	10	**25**	**1,2,3**	**NA**
M5	**Business Policies**	10	**25**	**1,2,3**	**NA**
Total Theory		**40**	**100**		
TUTORIAL		**8**			
TOTAL		**48**			

Reference Books:

1. Strategic Management – Anis Chattopadhyay – Taurean Publications

2. P.Subba Rao, Business policy and Strategic management , Himalaya publishing House.

3. Azhar Kazmi, Business Policy and Strategic Management,2e, Tata McGraw-Hill Publishing company Limited , 2016

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Course Name: Intellectual Property Rights
MIM 702B

Mode: Offline **Credits: 4**

Aim of the Course: The aim of this course is to equip students with a comprehensive understanding of Intellectual Property Rights (IPR). This course focuses on imparting fundamental knowledge about various types of IPR and their practical applications within business sectors, ensuring that students are well-prepared to protect and manage intellectual property effectively.

Course Objectives: This course aims to provide students with a comprehensive understanding of intellectual property rights (IPR) and their significance in the business world. Students will learn about the various types of IPR, including patents, trademarks, copyrights, and trade secrets, and the processes for securing these rights. The course will also cover practical guidelines for managing IP and the role of IP in driving business innovation, alongside the legal protections available to support and safeguard intellectual property.

Goals:

CO1: Students will gain a foundational understanding of intellectual property rights (IPR), including their definitions, types, and importance in the business world. They will learn about the global IPR system and its role in fostering innovation and economic growth.

CO2: Students will acquire knowledge about patents, trademarks, and copyrights, including their filing processes, legal frameworks, and their significance in branding and innovation. They will understand the implications of these rights for businesses.

CO3: Students will learn about trade secrets and geographical indications, including their importance and protection strategies. They will be equipped with practical guidelines for managing intellectual property and handling IP disputes.

CO4: Students will comprehend the role of intellectual property rights in promoting business innovation and growth. They will review the legal protections available for intellectual property and understand how these protections support business development.

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SI	Course Content	Mapped Module	Hours allotted
CO1	**Basics of Intellectual Property Rights (IPR)** Definition and importance of IPR, types of IPR: patents, trademarks, copyrights, trade secrets, geographical indications, introduction to the global IPR system: WIPO, TRIPS, understanding the role of IPR in business, and its relevance for innovation and economic growth.	M1	7
CO2	**Patents, Trademarks, and Copyrights** □ **Patents:** Overview of patents, types of patentable inventions, the patent filing process, international patent systems □ **Trademarks:** General principles, significance in branding, registration and protection processes □ **Copyrights:** Introduction to copyright law, copyrightable works, registration process □ **Legal Frameworks:** Overview of relevant laws including the Patent Act, Trademark Act, Copyright Act, and their implications for business	M2	10
CO3	**Trade Secrets, Geographical Indications, and Practical IPR Guidelines** □ **Trade Secrets:** Overview, importance, protection strategies □ **Geographical Indications (GI):** Introduction, significance, and examples of GI-protected products **Practical IPR Guidelines:** Basic dos and don'ts, common errors to avoid, and steps for handling IP disputes under Indian law.	M3	8
CO4	**Legal Protections and Innovation** Role of intellectual property rights in promoting R&D , Cyberspace Challenges and Piracy	M4	5

Learning Outcomes / Skills for Intellectual Property Rights Course

By the end of this course, students will have developed the following skills and competencies:

1. **Understanding IP Concepts and Hierarchies**:
   - Develop a clear understanding of different types of intellectual property and the hierarchical structure of IP rights, including patents, trademarks, copyrights, and trade secrets.
2. **IP Protection and Commercialization**:
   - Acquire skills to protect and manage intellectual property, including understanding the patent process, handling trade secrets, and leveraging IP for commercial purposes, especially in business contexts.
3. **IP Application in Business**
   - Gain the ability to apply IP knowledge to real-world scenarios, including how IP rights support innovation and development in the business environments.
4. **Practical IP Management and Enforcement:**
   - Learn practical strategies for managing IP assets, enforcing IP rights, and navigating legal frameworks to address IP disputes and ensure compliance.
5. **IP Guidelines and Global Perspectives:**
   - Understand practical guidelines for IP management, including dos and don'ts, and gain a global perspective on how international IP laws and treaties impact local and global business practices.

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Module Number	Content	Total Hours	% of questions	Bloom Level (applicable)	Remarks, if any
M1	**Basics of Intellectual Property Rights (IPR)**	7	20%	1,2,3	NA
M2	**Patents, Trademarks, and Copyrights**	10	30%	1,2,3	NA
M3	**Trade Secrets, Geographical Indications, and Practical IPR Guidelines**	8	30%	1,2,3	NA
M4	**Legal Protections and Innovation**	5	20%	2,3,4	NA
Total Theory		30	100		
Tutorial		10			
Total		40			

Books:

1. Intellectual Property Rights and Law - Dr. G.B. Reddy- Gogia Law Agency.
2. IPR law and Practice – Dr. S.V. Damodar Reddy – Asia Publishing House.
3. Intellectual Property Rights – Dr. Tamasmita Basu – Taurean Publications.