SPECIALIZATION
- INFORMATION SYSTEMS

MMBA22E28 **BIG DATA TECHNOLOGY**

MMBA22E28	**CONTROL SYSTEMS**	**C**	**L**	**T/SLr**	**P/R**	**T/L/ ETP**
	Total Contact Hours – 30	3	3	0	0	T
	Prerequisite – Degree					
	Course Designed by – Faculty of Management Studies					

OBJECTIVES

1. To understand the computational approaches to big data analytics;
2. To understand the various search methods and visualization techniques;
3. To learn to use various techniques for mining data stream;
4. To understand the applications using Map Reduce Concepts.

COURSE OUTCOMES (COs)

CO1	The knowledge of computing tools and techniques in the field of Big Data and to identify the challenges in Big Data with respect to IT Industry to
CO2	Convert any real world decision making problem to hypothesis and apply suitable statistical testing.
CO3	Recognize the key concepts of Hadoop framework
CO4	Several key big data technologies used for storage, analysis and manipulation of data
CO5	Appreciate the computational software's and techniques for handling big data in business applications and Learn to use HIVE AND HIVEQL, HBASE query tools

	Mapping of Course Outcomes with Program outcomes (Pos)					
	(3/2/1 indicates strength of correlation) 3-HIGH, 2 -Medium, 1-Low					
1	COs/POs	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**
2	**CO1**	1			3	
	CO2	2	3	1	3	3
	CO3					
	CO4		3		1	3
	CO5	3		3		

3	Category	General (A)	Basic Sciences andMaths (B)	Professional Core (D)	Professional Elective (E)	Project / Seminar / Internship (H)
					✓	
4	Approval			Meeting of Academic Council, June 2022		

MMBA22E28 BIG DATA TECHNOLOGY

UNIT – I INTRODUCTION TO BIG DATA **6 hours**

Introduction – Distributed file system – Big Data and its importance, Four Vs. Drivers for Big data, Big data analytics, Big data applications. Algorithms using map reduce-Challenges of Conventional Systems - Intelligent data analysis – Nature of Data - Analytic Processes and Tools - Analysis vs. reporting.

UNIT – II MINING DATA STREAMS **6 hours**

Introduction to Streams Concepts – Stream Data Model and Architecture - Stream Computing - Sampling Data in a Stream – Filtering Streams – Counting Distinct Elements in a Stream – Estimating Moments – Counting Oneness in a Window – Decaying Window - Real time Analytics Platform(RTAP) Applications

UNIT – III HADOOP ARCHITECTURE **6 hours**

Big Data – Apache Hadoop and Hadoop Ecosystem – Moving Data in and out of Hadoop – Understanding inputs and outputs of Map Reduce - Data Serialization.

Hadoop Architecture, Hadoop Storage: HDFS, Common Hadoop Shell commands, Anatomy of File Write and Read. Name Node, Secondary Name Node, and Data Node, Hadoop Map Reduce paradigm

UNIT – IV HADOOP ECOSYSTEM AND YARN **6 hours**

Hadoop ecosystem components - Schedulers - Fair and Capacity, Hadoop 2.0 New Features Name Node High Availability, HDFS Federation

UNIT – V HIVE AND HIVEQL, HBASE **6 hours**

Hive Architecture and Installation, Comparison with Traditional Database, HiveQL – Querying Data - Sorting and Aggregating, Map Reduce Scripts, Joins and Subqueries

TOTAL NO OF PERIODS: 30 HOURS

Reference Books:

1. Boris lublinsky, Kevin t. Smith, Alexey Yakubovich, “Professional Hadoop Solutions”, Wiley, ISBN: 9788126551071, 2015.
2. Chris Eaton, Dirk deroos et al. , “Understanding Big data ”, McGraw Hill, 2012.
3. Tom White, “HADOOP: The definitive Guide” , O Reilly 2012.
4. VigneshPrajapati, “Big Data Analytics with R and Haoop”, Packet Publishing 2013.
5. Tom Plunkett, Brian Macdonald et al, “Oracle Big Data Handbook”, Oracle Press, 2014
6. http://www.bigdatauniversity.com/
7. JyLiebowitz, “Big Data and Business analytics”,CRC press, 2013..

FACULTY OF MANAGEMENT STUDIES

MBA- Two Year Full Time Program- Curriculum and Syllabus

Program Structure for MBA (Full Time)

MMBA22E29 DATABASE MANAGEMENT SYSTEM

MMBA22E29	**CONTROL SYSTEMS**	**C**	**L**	**T/SLr**	**P/R**	**T/L/ ETP**
	Total Contact Hours – 30	3	3	0	0	T
	Prerequisite – Degree					
	Course Designed by – Faculty of Management Studies					

OBJECTIVE

The course has been designed to introduce the students with the applications of systems designed to manage the data resources of organizations.

COURSE OUTCOMES (COs)

CO1	Describe the fundamental elements of relational database management systems and understand the database systems and its applications
CO2	Conceptualize and depict a database system using ER diagram
CO3	Construct queries using relational database and SQL
CO4	Understand the functional dependencies and design database using Normalization. Differentiate the properties for concurrent execution of transactions and learn techniques for controlling the consequences of concurrent data access.
CO5	Ability to gain knowledge and handle all new trending technology in Database Management

	Mapping of Course Outcomes with Program outcomes (Pos)					
	(3/2/1 indicates strength of correlation) 3-HIGH, 2 -Medium, 1-Low					
1	COs/POs	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**
2	**CO1**	3	2	3	3	3
	CO2		3	2		3
	CO3	3			2	
	CO4	3	3	3	2	
	CO5	3	3	2		2

3	Category	General (A)	Basic Sciences andMaths (B)	Professional Core (D)	Professional Elective (E)	Project / Seminar / Internship (H)
					✓	
4	Approval			Meeting of Academic Council, June 2022		

MMBA22E29 DATABASE MANAGEMENT SYSTEM

UNIT-I INTRODUCTION: **6 hours**

Introduction – Data Models – Database languages – Transaction – Storage management – Database administrator – Users – overall system structure – Entity – Relationship Model – Basic concepts –Mapping constraints – keys – E - R Diagram

UNIT-II RELATIONAL DATA MODEL **6 hours**

Integrity constraints – Domain constraints – referential integrity – assertions – triggers – functional dependencies – relational database design – decomposition – normalization using functional, multi valued, Join dependencies– Domain – Key Normal form

UNIT-III INTRODUCTION ON SQL **6 hours**

Relational Model – structure – relational algebra – extended operations – Modifications on a database – views – SQL – basic structure – set operations – aggregate functions – Nested Sub queries – derived relations, views.

UNIT-IV TRANSACTION PROCESSING CONCEPT **6 hours**

Transaction system - Testing of serializability - Serializability of schedules - Conflict and view serializable schedule – Recoverability - Backup - Recovery from transaction failures - Log based recovery – Checkpoints - Deadlock handling - Concurrency control

UNIT-V RECENT TRENDS IN DATABASE MANAGEMENT SYSTEMS **6 hours**

Centralized and Client - Server Architectures - Distributed Databases – Object oriented database - Spatial and Temporal Databases - Decision Support Systems - Data Analysis - Data Mining andWarehousing - Data visualization - Mobile databases - Spatial and geographical databases - Web and Mobile databases

TOTAL NO. OF PERIODS: 30 HOURS

Reference Books:

1. Navathe E - Fundamentals of Database Systems (Pearson Education,)
2. Majumdar and Bhattacharya - Database Management System (Tata McGraw Hill)
3. Chakrabarti- Advance Database Management System (Wiley Dreamtech)
4. Beynon -Davies P- Database Systems (Palgrave)
5. Karthikeyan-Understanding Database Management System (Acme Learning)

MMBA22E30 DECISION SUPPORT SYSTEM

MMBA22E30	**CONTROL SYSTEMS**	**C**	**L**	**T/SLr**	**P/R**	**T/L/ ETP**
	Total Contact Hours – 30	3	3	0	0	T
	Prerequisite – Degree					
	Course Designed by – Faculty of Management Studies					

OBJECTIVES

1. To understand the concept of Decision support system
2. To gain the basic knowledge on Model Base Management System
3. To understand the Basis of DBMS
4. To get the clear insights on Model Acquisition and Dialog development in decision support system
5. To gain a clear knowledge on Dialogue Management on Decision support system

COURSE OUTCOMES (COs)

CO1	Knowledge and skills on Basics of DBMS
CO2	Understand the role of importance in Model Languages and its types
CO3	Knowledge on basics of Dialog Management and Decision support System
CO4	Understand the importance of Modeling Languages and developing dialog.
CO5	Capable of developing decision support system.

	Mapping of Course Outcomes with Program outcomes (Pos)					
	(3/2/1 indicates strength of correlation) 3-HIGH, 2 -Medium, 1-Low					
1	COs/Pos	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**
2	**CO1**	3		3	3	2
	CO2	3	3	3	3	
	CO3	3		3	3	3
	CO4	3	3	3	3	
	CO5	3	3	3	2	3
3	Category	General (A)	Basic Sciences andMaths (B)	Professional Core (D)	Professional Elective (E)	Project / Seminar / Internship (H)
					✓	
4	Approval			Meeting of Academic Council, June 2022		

MMBA22E30 DECISION SUPPORT SYSTEM

UNIT –I INTRODUCTION **6 hours**

Introduction: Decision concept – Steps – Decision Support System – Components – Characteristics – Classifications and Applications.

UNIT- II MODEL MANAGEMENT **6 hours**

Model Management: Model – Modeling Process – Types of Models – Optimization – Simulation – Heuristic: Descriptive – Predictive Model Base – Modeling Languages – Model Directory, Model Base Management System – Model Execution, Integration and Command Processing – Model Packages.

UNIT- III DATA MANAGEMENT SYSTEM **6 hours**

Data Management System: Data Base – Sources of Data – Data Directory – Data Structure and Data Base Languages – Query Facility – Data Management System –DBMS as DSS Development Tool.

UNIT- IV DIALOG MANAGEMENT **6 hours**

Dialog Management: User Interface – Graphics – Multimedia – Visual Interactive Modeling – Natural language processing – Speech Recognition and Understanding – Issues in User interface.

UNIT –V DEVELOPMENT OF DECISION SUPPORT SYSTEM **6 hours**

Development of Decision Support System: Development Process – Software and Hardware; Data Acquisition – Model Acquisition – Dialog development – Integration – Testing and Validation – Training and Implementation.

TOTAL NO. OF PERIODS: 30 HOURS

Reference Books:

1. Janakiraman, V.S. and Sarukesi, Decision Support Systems, 2ndEdition, PHI Learning, 2009.
2. Marakas, G.M., Decision Support Systems in the 21st century, 2ndEdition, PHI Learning, 2009.
3. Sauter, V., Decision Support Systems for Business Intelligence, 2ndEdition,John Wiley and Sons, 2011.
4. Taylor, J., Decision Management Systems: A Practical Guide to Using Business Rules and Predictive Analytics, IBM Press, 2011.
5. Turban, E., Delen, E. and Sharda, R., Decision Support and Business Intelligence Systems, 9thEdition, Pearson, 2011.

FACULTY OF MANAGEMENT STUDIES

MBA- Two Year Full Time Program- Curriculum and Syllabus

Program Structure for MBA (Full Time)

MMBA22E31 SYSTEMS ANALYSIS and DESIGN

MMBA22E31	**CONTROL SYSTEMS**	**C**	**L**	**T/SLr**	**P/R**	**T/L/ ETP**
	Total Contact Hours – 30	3	3	0	0	T
	Prerequisite – Degree					
	Course Designed by – Faculty of Management Studies					

OBJECTIVES

1. This course is designed to help students to understand the different types of analysis and
2. To know the real application reviews that can be used to give the students a grounding and real practice.

COURSE OUTCOMES (COs)	
CO1	Perform various approaches to systems development.
CO2	Carryout different types of analysis.
CO3	Capable of performing data modeling and analysis.
CO4	Design databases, implementation strategies.
CO5	Enable user friendly system design for easy business operation.

	Mapping of Course Outcomes with Program outcomes (Pos)					
	(3/2/1 indicates strength of correlation) 3-HIGH, 2 -Medium, 1-Low					
1	COs/POs	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**
2	**CO1**		2			
	CO2	3			2	3
	CO3		2			
	CO4	2		2		3
	CO5	3	3	3	3	3
3	Category	General (A)	Basic Sciences andMaths (B)	Professional Core (D)	Professional Elective (E)	Project / Seminar / Internship (H)
					✓	
4	Approval			Meeting of Academic Council, June 2022		

MMBA22E31 SYSTEMS ANALYSIS and DESIGN

UNIT – I INTRODUCTION TO SYSTEM AND APPROACHES 6 hours

System Analysis Fundamentals: Introduction to System - System analysis and design - Need for system analysis and Design - Role of the system analyst - System development strategies Structured approach - Information Engineering Approach - Object Oriented Approach.

UNIT – II SYSTEMS ANALYSIS 6 hours

Systems Analysis - Gathering Information – Discovery – Feasibility - Economics technical operational – Schedule – Analysis - Cost Benefit Analysis - Risk Analysis - System Proposal.

UNIT – III FINDING TECHNIQUES AND SYSTEM ANALYSIS TASK 6 hours

Review and Selection Fact-Finding Techniques: Interview, Questionnaire, Record Review. Investing system requirement - Data Modeling and Analysis - Process Modeling - Logic Modeling - Conceptual Modeling - Alternative Design Strategy - Distributed data Modeling.

UNIT – IV SYSTEM DESIGNING DATA BASES 6 hours

The Essentials of Design Designing Effective output: Objectives - Types of Output - Method. of Systems Design - Application Architecture and Modeling - Forms and Reports - Interfaces and Dialog - Logical data modeling - Designing relational data bases - User interface design -Designing distributed systems.

UNIT – V IMPLEMENTATION AND SUPPORT 6 hours

Systems construction and Implementation – Maintenance - Systems Operations and Support -Object Oriented Analysis and Design - Rapid Application development – Documentation -Training and Support.

TOTAL NO. OF PERIODS: 30 HOURS

Reference Books:

1. Hofter, Joey F.George, Joseph.SValacich, *Modern Systems Analysis and Design*, 3rd Edition 2002, Addison Wesley, ISBN: 0130339903, 9780130339904.
2. Alan Dennis and Barabara Haley Wixom, *Systems Analysis and Design*, 6th Edition 2014, John Wiley and Sons, Inc., 2000, ISBN: 9781118897867.
3. Jeffrey L.Whitten, Lonnie D.Bentley and KevinC.Dittman,SystemsAnalysisi and Design Methods, 6th edition 2003,McGraw Hill, Irwin, ISBN: 0073052337, 9780073052335.
4. Hawryszkiewycz, I.T,'Introduction to System Analysis and Design, 4th Edition, Prentice Hall, ISBN: 0134845854, 9780134845852.
5. Ivar Jacobson, *Object Oriented Software Engineering*, Latest Edition 2005, Addison Wesley, ISBN: 0321268881, 9780321268884.

MMBA22E32 ARTIFICIAL INTELLIGENCE

MMBA22E32	CONTROL SYSTEMS	C	L	T/SLr	P/R	T/L/ ETP
	Total Contact Hours – 30	3	3	0	0	T
	Prerequisite – Degree					
	Course Designed by – Faculty of Management Studies					

OBJECTIVES

1. To get the clear insights on concept of Artificial Intelligence
2. To understand the problem-solving method in Artificial Intelligence
3. To gain the knowledge-on-knowledge representation in Artificial Intelligence
4. To focus on software architecture
5. To gain the knowledge on AI Applications

COURSE OUTCOMES (COs)

CO1	Develop the skills on Artificial Intelligence.
CO2	Knowledge and skills on Alpha-Beta Pruning and Constraint Satisfaction.
CO3	Understand the Basics of Software Architecture in Artificial Intelligence.
CO4	Knowledge on Architecture for intelligent agent and the roles.
CO5	Develop the basic skills on AI Applications.

	Mapping of Course Outcomes with Program outcomes (Pos)					
	(3/2/1 indicates strength of correlation) 3-HIGH, 2 -Medium, 1-Low					
1	COs/Pos	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**
2	**CO1**	3	3	2	3	3
	CO2	3	3	3	3	
	CO3	3	3	3	2	3
	CO4	3	3	3	2	3
	CO5	3	3	3	1	3
3	Category	General (A)	Basic Sciences andMaths (B)	Professional Core (D)	Professional Elective (E)	Project / Seminar / Internship (H)
					✓	
4	Approval			Meeting of Academic Council, June 2022		

MMBA22E32 ARTIFICIAL INTELLIGENCE

UNIT- I INTRODUCTION **6 hours**

Introduction: Definition - Future of Artificial Intelligence – Characteristics of Intelligent Agents– Typical Intelligent Agents – Problem Solving Approach to Typical AI problems.

UNIT- II PROBLEM SOLVING METHODS **6 hours**

Problem solving Methods — Search Strategies- Uninformed — Informed — Heuristics — Local Search Algorithms and Optimization Problems — Constraint Satisfaction Problems — Constraint Propagation — Backtracking Search — Game Playing — Optimal Decisions in Games — Alpha-Beta Pruning.

UNIT -III KNOWLEDGE REPRESENTATION **6 hours**

First Order Predicate Logic -— Unification — Forward Chaining-Backward Chaining — Resolution — Knowledge Representation - Events — Mental Events and Mental Objects.

UNIT- IV SOFTWARE ARCHITECTURE **6 hours**

Architecture for Intelligent Agents — Agent Communication — Negotiation and Bargaining — Argumentation among Agents — Trust and Reputation in Multi-agent systems.

UNIT -V AI APPLICATIONS **6 hours**

AI applications — Language Models — Information Retrieval- Information Extraction — Natural Language Processing - Machine Translation — Speech Recognition — Robot — Hardware — Perception — Planning — Moving.

TOTAL NO. OF PERIODS: 30 HOURS

Reference Books:

1. Stuart Russel and Peter Norvig, “Artificial intelligence: A Modern Approach’, Fourth Edition, Pearson Education, 2020.
2. Dan W.Patterson, “Introduction to AI and ES’, Pearson Education, 2007.
3. Kevin Night, Elaine Rich, and Nair B, “Artificial Intelligence’, McGraw Hill, 2008.
4. PatrikH,.Winston,, “Artificial Intelligence’, Third edition, Pearson Edition, 2006.
5. Deepak Khemani, “Artificial Intelligence”, Tata McGraw Hill Education, 2013.
6. Artificial Intelligence by Example Develop machine intelligence from scratch using real artificial intelligence use cases-by Dennis Rothman, 2018.

FACULTY OF MANAGEMENT STUDIES

MBA- Two Year Full Time Program- Curriculum and Syllabus

Program Structure for MBA (Full Time)

MMBA22E33 SOFTWARE QUALITY AND PROJECT MANAGEMENT

MMBA22E33	CONTROL SYSTEMS	C	L	T/SLr	P/R	T/L/ ETP
	Total Contact Hours – 30	3	3	0	0	T
	Prerequisite – Degree					
	Course Designed by – Faculty of Management Studies					

OBJECTIVES

1. To understand project management cycle in software development;
2. To study various project estimation and quality models in software development;
3. To understand the various quality management tools in software project management and
4. To study the various ISO Tools implemented for software quality assurance.

COURSE OUTCOMES (COs)

CO1	Develop the basic skills in project planning in software.
CO2	Understand the Basic Software Models used in Project Management
CO3	Apply various models to ensure software quality.
CO4	Understand the basics about Agile and Lean Management Process.
CO5	Knowledge on cost estimation and ISO Tools.

	Mapping of Course Outcomes with Program outcomes (Pos)					
	(3/2/1 indicates strength of correlation) 3-HIGH, 2 -Medium, 1-Low					
1	COs/Pos	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**
2	**CO1**	3	3	3	3	2
	CO2	3	3	3	3	2
	CO3	3	3	3	3	2
	CO4	3	3	2	3	3
	CO5	3		3	3	

3	Category	General (A)	Basic Sciences andMaths (B)	Professional Core (D)	Professional Elective (E)	Project / Seminar / Internship (H)
					✓	
4	Approval			Meeting of Academic Council, June 2022		

MMBA22E33 SOFTWARE QUALITY AND PROJECT MANAGEMENT

UNIT – I SOFTWARE QUALITY **6 hours**

Software quality - The place of software quality in project planning - Importance of software quality - Defining software quality - Practical software quality measures - Quality Management Systems.

UNIT – II SOFTWARE MODELS **6 hours**

Software Quality Models – Mc-Calls Models - Applying seven basic quality tools in software development - Measuring Quality – COQUAMO - Lean software development.

UNIT – III SOTWARE QUALITY ASSURANCE **6 hours**

Software Reliability models - Rayleigh model - Weibull model - Defect removal effectiveness - Quality standards - ISO 9000 models and standards for process improvement - ISO/IEC 9126-1 to 9126-4.

UNIT – IV INTRODUCTION ABOUT SOFTWARE PROJECTS **6 hours**

Software Projects - Projects Planning - Process models – Waterfall – RAD - V-Spiral - Incremental – Prototyping – Agile - Project Tracking.

UNIT- V SOFTWARE PROJECT ESTIMATION **6 hours**

Effort and Cost Estimation - Expert Judgment, LOC, Function Points, Extended Function Points, Feature Points, Object Points, COCOMO-81 - COCOMO-II - Risk Management.

TOTAL NO. OF PERIODS: 30 HOURS

Reference Books:

1. Software Project Management, Bob Hughes, Mike
2. Effective Software Project Management, Robert K. Wysocki, Wiley
3. Roger S. Pressman, Software Engineering A Practioners Approach, McGraw Hill International Edition, New Delhi, 8th Edition, 2014
4. Stephen Kan, Metrics and Models in Software Quality Engineering, Pearson Education Asia, 8th Impression 2009.

FACULTY OF MANAGEMENT STUDIES

MBA- Two Year Full Time Program- Curriculum and Syllabus

Program Structure for MBA (Full Time)

MMBA22E34 ENTERPRISE RESOURCE PLANNING

MMBA22E34	CONTROL SYSTEMS	C	L	T/SLr	P/R	T/L/ ETP
	Total Contact Hours – 30	3	3	0	0	T
	Prerequisite - Degree					
	Course Designed by – Faculty of Management Studies					

OBJECTIVES

1. This course is designed to help students understand issues affecting ERP systems and ERP implementation;
2. Real application reviews will be used to give the students a grounding and real practice;
3. To exhibit the theoretical aspects of Enterprise Resource Planning and
4. To provide practical implication on ERP Suite implementation.

COURSE OUTCOMES (COs)

CO1	Knowledge of risk and benefits associated with Enterprise Resource Planning.
CO2	Knowledge or ERP solutions and functional modules.
CO3	Exposure to the implementation environment.
CO4	Understanding of post implementation impact and maintenance of ERP.
CO5	Knowledge of emerging trends on ERP.

	Mapping of Course Outcomes with Program outcomes (Pos)					
	(3/2/1 indicates strength of correlation) 3-HIGH, 2 -Medium, 1-Low					
1	COs/POs	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**
2	**CO1**	2	2	3	3	3
	CO2		2	2		3
	CO3	3			2	
	CO4	3	3	2	3	2
	CO5	2	3	2		2
3	Category	General (A)	Basic Sciences andMaths (B)	Professional Core (D)	Professional Elective (E)	Project / Seminar / Internship (H)
					✓	
4	Approval			Meeting of Academic Council, June 2022		

MMBA22E34 ENTERPRISE RESOURCE PLANNING

UNIT- I INTRODUCTION **6 hours**

Overview of enterprise systems – Evolution - Risks and benefits - Fundamental technology - Warehouse Management.

UNIT- II ERP SOLUTIONS AND FUNCTIONAL MODULES **6 hours**

Overview of ERP software solutions – BPR - Project management - Functional modules -Organizational data - Master data and document flow.

UNIT- III ERP IMPLEMENTATION **6 hours**

Planning Evaluation and selection of ERP systems - Implementation life cycle - ERP implementation - Methodology and Frame work- Training – Data Migration - People Organization in implementation Consultants - Vendors and Employees.

UNIT- IV POST IMPLEMENTATION **6 hours**

Maintenance of ERP - Organizational and Industrial impact - Success and Failure factors of ERP Implementation.

UNIT V EMERGING TRENDS ON ERP **6 hours**

Extended ERP systems and ERP add-ons – CRM – SCM - Business analytics - Future trends in ERP systems-Web enabled - Wireless technologies - Cloud computing and augmented reality.

TOTAL NO. OF PERIODS: 30 HOURS

Reference Books:

1. Alexis Leon, ERP demystified, second Edition Tata McGraw-Hill, 2008.
2. Simha R. Magal , Jeffrey Word, Integrated Business processes with ERP systems, John Wiley and Sons, 2012.
3. Jagan Nathan Vaman, ERP in Practice, Tata McGraw-Hill, 2008
4. Alexis Leon, Enterprise Resource Planning, second edition, Tata McGraw-Hill, 2008.
5. MahadeoJaiswal and Ganesh Vanapalli, ERP Macmillan India, 2009
6. Vinod Kumar Grag and N.K. Venkitakrishnan, ERP- Concepts and Practice, Prentice Hall of India, 2006.