Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore
Shri Vaishnav Institute of Computer Applications
Name of Program: MCA(Banking Technology)

COURSE CODE	CATEGORY	COURSE NAME	L	T	P	CREDITS	TEACHING & EVALUATION SCHEME				
							THEORY			PRACTICAL	
							END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*
MCBT301	Compulsory	Biometric Systems in Banking	3	1	0	4	60	20	20	0	0

Legends: L – Lecture; T – Tutorial/Teacher Guided Student Activity; P – Practical; Q/A – Quiz/Assignment/Attendance; MST – Mid Semester Test.
*Teacher Assessment shall be based on following components: Quiz/Assignment/Project/Participation in class activities, given that no component shall exceed more than 10 marks

Course Education Objectives (CEOs):

• To introduce biometric traits and its aim, image processing basics, basic image operations.
• Understand the various methods of password management and protocols to maintain system security.

Course Outcomes (COs):

After the successful completion of this course students will be able to: -
• Elaborate the security aspects in biometrics.
• Explore biometric application areas.
• Understand the various methods of password management and protocols to maintain system security.
• Describe different concepts related to the biometrics and image processing.

Unit-I

BIOMETRIC FUNDAMENTALS AND STANDARDS:
Definition, Biometrics versus traditional techniques, Characteristics, Key biometric processes: Verification, Identification, Biometric matching, Performance measures in biometric systems, Assessing the privacy risks of biometrics, Designing privacy sympathetic biometric systems, Different biometric standards, Application properties.

Unit-II

PHYSIOLOGICAL BIOMETRICS:
Facial scan, Ear scan, Retina scan, Iris scan, Finger scan, Automated finger-print identification system, Palm print, Hand vascular geometry analysis, DNA, Dental.

Unit-III

BEHAVIOURAL BIOMETRICS:
Signature scan, Keystroke scan, Voice scan, Gait recognition, Gesture recognition, Video face, Mapping the body technology.

Unit-IV

USER INTERFACES:
Biometric interfaces: Human machine interface BHMI structure, Human side interface: Iris image interface, Hand geometry and fingerprint sensor, Machine side interface: Parallel port, Serial port, Network topologies, Case study: Palm scanner interface.

Unit-V

BIOMETRIC APPLICATIONS:
Categorizing biometric applications, Application areas: Criminal and citizen identification, Surveillance PC/network access, Ecommerce and retail/ATM, Costs to deploy, Issues in deployment, Biometrics in medicine, cancellable biometrics.

Text Books:

1. Paul Reid, "Biometrics for Network Security", First Edition, Prentice Hall, 2004.
2. NaliniRatha, Ruud Bolle, "Automatic Fingerprint Recognition System", Springer, 2004.
3. Laxmi C. Jain, U. Halici, I. Hayashi, S. B. Lee, S. Tsutsui, "Intelligent Biometric Techniques in Fingerprint and Face Recognition", First Edition, Routledge, 1999.
4. S. Y. Kung, M.W. Mak, S. H. Lin, "Biometric Authentication: A Machine Learning Approach", First Edition, Prentice Hall, 2010.

Reference Books:

1. John Chirillo, Scott Blaul, "Implementing Biometric Security", John Wiley & Sons, 2003.
2. Samir Nanavati, Michael Thieme, Raj Nanavati, "Biometrics: Identity Verification in a Networked World", First Edition, Wiley, 2002.
3. John R. Vacca, "Biometric Technologies and Verification Systems", First Edition, Elsevier Science, 2007.

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COURSE CODE	CATEGORY	COURSE NAME	L	T	P	CREDITS	THEORY END SEM University Exam	Two Term Exam	Teachers Assessment*	PRACTICAL END SEM University Exam	Teachers Assessment*
MCA302	COMPULSORY	Software Engineering	3	0	4	5	60	20	20	30	20

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical;   C - Credit;
Q/A – Quiz/Assignment/Attendance, MST - Mid Sem Test.
*Teacher Assessment shall be based on following components: Quiz / Assignment / Project/Participation in class (Given that no component shall be exceed 10 Marks)

Course Education Objectives (CEOs):
- To provide knowledge about system development.
- To impart knowledge about software process models.
- To provide detailed knowledge about software design.
- To acquaint students with software quality and testing.
- To provide study of MIS.

Course Outcomes (COs): Students will be having:
- An ability to understand system design and its constraints.
- An ability to apply knowledge of software engineering.
- An ability to design a system, a component or process to meet desired needs.
- An ability to identify, formulate and solve engineering Problems
- An ability to measure and to understand quality issues.
- An ability to understand MIS and DSS.

UNIT -I
Introduction to Software Engineering: Software problem, Software engineering problem, Software engineering approach, Software characteristics and Applications. System's concept, characteristics of system, elements of system, The System Development Life Cycle, The Role of System Analyst.

UNIT -II
Software Processes: Software processes and its components, characteristics of software processes, Software development processes: Linear Sequential model, Prototyping model, RAD model, Iterative Enhancement model, Spiral model, Component based development, Comparative study of various development models.

UNIT-III
Software Project Planning: Project planning objectives, Decomposition Techniques, Empirical

estimation models, The Make/Buy Decision., Risk analysis. Software Design: Design Principles, Cohesion & Coupling.

UNIT-IV
Software Quality Assurance: Quality Concepts, The Quality Movement. Software Reviews: Formal Technical Reviews. Statistical Software Quality Assurance, Software Reliability. **Software Testing Techniques:** Testing fundamentals, White box testing, Black box testing. Testing Strategies: A strategic approach of software testing strategic issues, unit testing, integration testing, validation testing, system testing.

UNIT-V
MIS & DSS: Introduction to MIS, long range planning, development and implementation of an MIS, Applications of MIS in manufacturing sector and service sector. Decision Support System concepts, types of DSS.

Text Books:
1. R. S. Pressman, "Software Engineering – A practitioner's approach", 6th ed., McGraw Hill Int.
2. Pankaj Jalote "Software Engg" Narosa Publications.
3. Ian Sommerville : Software Engineering 6/e (Addison-Wesley)
4. Richard Fairley : Software Engineering Concepts (TMH)
5. Elis Awad, "System Analysis & Design", Galgotia publications
6. W.S. Jawadekar: Management Information Systems, TMH Publication, India

Practical List:
1. To study the Software Development Life Cycle.
2. To understand and apply good Software Analysis and Design practices
3. To study Data Flow Diagrams (DFDs) and levels in DFDs.
4. To create Data Dictionary for some applications
5. To use various information gathering tools (Questionnaire, Interview, On Site Survey)
6. To choose suitable software development process models for developing different applications.
7. Perform Feasibility Study and to create Feasibility Report for applications.
8. To make decision whether to buy/lease/ develop the software.
9. To understand and create Use Case Diagram.
10. To study Functional Point Analysis.
11. To devise Test Cases for software testing, black-box, white-box testing and different types of testing.
12. To study the Risk Management during the software development.
13. To assure Quality of Software, Statistical Software Quality Assurance, Reliability of Software.
14. To understand and apply concepts of Project Management.
15. Case study (MIS and DSS).

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COURSE CODE	CATEGORY	COURSE NAME	L	T	P	CREDITS	TEACHING & EVALUATION SCHEME				
							THEORY			PRACTICAL	
							END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*
MCA311	Elective-I	Cloud Computing	3	1	0	4	60	20	20	0	0

Legends: L – Lecture; T – Tutorial/Teacher Guided Student Activity; P – Practical; Q/A – Quiz/Assignment/Attendance. MST – Mid Semester Test.
*Teacher Assessment shall be based on following components: Quiz/Assignment/Project/Participation in class activities, given that no component shall exceed more than 10 marks.

Course Education Objectives (CEOs):
The goal of this course is to provide students with an understanding of basic concepts of cloud computing along with cloud computing architecture, cloud management and cloud security.
Course Outcomes (COs): After course completion Students will be able to understand:
1. Concept of cloud computing with broader perspective of cloud architecture and reference models.

2. Theory of cloud Management and its security.

3. Virtualization Technology Management.

4. Applications of cloud computing with the help of some important commercial systems like Google App Engine, Microsoft Azure and Amazon.

Unit-I

Cloud Computing: Introduction, Historical development, principles and vision, Cloud services requirements, Types of Clouds, Advantages and disadvantages of cloud computing, effect of cloud computing on human lives, Characteristics of Cloud Computing, Cloud and dynamic infrastructure, key elements in adopting cloud, Cloud adoption rudiments.

Unit-II
Architecture for Cloud Computing: Cloud Computing Environments, Characteristics of cloud computing as per NIST, Concepts of Deployment Models and Service Models, Cloud Interoperability &Standards, Scalability and Fault Tolerance.

Cloud Solutions: Cloud Ecosystem and its benefits, Cloud Business Process Management, Cloud Service Management.

Cloud Offerings: Cloud Analytics, Testing Under Control.

Unit-III

Cloud Management: Resiliency, Provisioning, Asset management, Concepts of Map reduce, Cloud Governance, High Availability and Disaster Recovery. Market Based Management of Clouds, Federated Clouds/Inter Cloud: Characterization & Definition.

Unit-IV

Virtualization Technology: Introduction, working process of virtualization and benefits of virtualization. **Type of virtualization: Hardware Virtualization, Software Virtualization, Memory Virtualization, Storage Virtualization, Data and Network Virtualization, Desktop and Application virtualization. Technology used for virtualization,** Hypervisor Virtualization Software, Virtual LAN (VLAN) and Virtual SAN (VSAN) with their benefits.

Unit-V
Cloud Security: Introduction of cloud Information security services, Design principles, Secure Cloud Software Requirements, Policy Implementation, and Security Challenges. Introduction of cloud applications: ECG Analysis in the cloud. CRM and ERP, Social networking.

Case study of cloud computing platforms: Google App Engine, Microsoft Azure, Hadoop. Amazon.

Textbooks:
1. Judith S. Hurwitz, Daniel Kirsch" Cloud Computing For Dummies, 2nd Edition,John Wiley and Sons inc., New Jersey, 2000.
2. Hashmi, Tahir, Landreau, Jean-Francois" Cloud Strategy: A Decision-based Approach to cloud migration" GregorHohpe:An architect Elevator Guide,2019-2020.
3. Kavis, Michael J. "Architecting the Cloud: Design Decisions for Cloud Computing Service Models (SaaS, PaaS, and IaaS) John Wiley and Sons inc., Hoboken, New Jersey, 2000.
4. Mr. Ray J Rafaels "Cloud Computing: From Beginning to End" Second edition, paperback,2018.

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| COURSE CODE | CATEGORY | COURSE NAME | L | T | P | CREDITS | TEACHING & EVALUATION SCHEME | | | | |
| | | | | | | | THEORY | | | PRACTICAL | |
							END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*
MCA321	Elective-I	Internet of Things	3	1	0	4	60	20	20	0	0

Legends: L – Lecture; T – Tutorial/Teacher Guided Student Activity; P – Practical; Q/A – Quiz/Assignment/Attendance; MST – Mid Semester Test.

*Teacher Assessment shall be based on following components: Quiz/Assignment/Project/Participation in class activities, given that no component shall exceed more than 10 marks

Course Education Objectives (CEOs):
1. Vision and Introduction toIoT.
2. Understand IoT Market perspective.
3. Data and Knowledge Management and use of Devices in IoT Technology.
4. Understand State of the Art – IoT Architecture.
5. Real World IoT Design Constraints, Industrial Automation and Commercial Building Automation in IoT.

Course Outcomes (COs):
At the end of the course the student will be able to:
1. Understand the vision of IoT from a global context.
2. Determine the Market perspective of IoT.
3. Use of Devices, Gateways and Data Management in IoT.
4. Building state of the art architecture in IoT.
5. Application of IoT in Industrial and Commercial Building Automation and Real World Design Constraints

Unit-I
Introduction to the internet of things – origins, early concepts and products, Examples of current products and value propositions, Architectures and design patterns, Analysis of a full connected- object experience. State of the Art, challenges and future directions. Role of Cloud in IoT, Security aspects in IoT.

Unit-II
Elements of IoT: Hardware Components- Computing (Arduino, Raspberry Pi), Communication, Sensing, Actuation, I/O interfaces. Software Components- Programming API's (using Python/Node.js/Arduino) for Communication Protocols-MQTT, ZigBee, Bluetooth, CoAP, UDP, TCP.

Unit-III
IoT Application Development: Solution framework for IoT applications- Implementation of Device integration, Data acquisition and integration.

Unit-IV

Device data storage: Unstructured data storage on cloud/local server, Authentication, authorization of devices.

Unit-V

IoT Case Studies: IoT case studies and mini projects based on Industrial automation, Home Automation.

Text Books:

1. Vijay Madisetti, ArshdeepBahga, Ïnternet of Things, "A Hands on Approach",University Press.
2. Dr. SRN Reddy, RachitThukral and Manasi Mishra, "Introduction to Internet of Things: Apractical Approach", ETILabs.
3. JeevaJose, "Internet of Things", Edition 2018, Khanna Publishing House,Delhi.
4. Adrian McEwen, "Designing the Internet of Things", Edition 2013, Wiley.
5. Raj Kamal, "Internet of Things: Architecture and Design", Edition 2017, McGrawHill.

Reference Books:

1. Jan Holler, VlasiosTsiatsis, Catherine Mulligan, Stefan Avesand, StamatisKarnouskos, David Boyle, "From Machine-to-Machine to the Internet of Things: Introduction to a New Age of Intelligence", 1st Edition, Academic Press,2014.
2. Francis daCosta, "Rethinking the Internet of Things: A Scalable Approach to Connecting Everything", 1st Edition, Apress Publications,2013

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COURSE CODE	CATEGORY	COURSE NAME	L	T	P	CREDITS	TEACHING & EVALUATION SCHEME				
							THEORY			PRACTICAL	
							END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*
MCA331	Elective-I	Distributed Systems	3	1	0	4	60	20	20	0	0

Legends: L – Lecture; T – Tutorial/Teacher Guided Student Activity; P – Practical; Q/A – Quiz/Assignment/Attendance; MST – Mid Semester Test.

*Teacher Assessment shall be based on following components: Quiz/Assignment/Project/Participation in class activities, given that no component shall exceed more than 10 marks

Course Education Objectives (CEOs):
- Understand foundations of Distributed Systems
- Understand the network virtualization, remote method invocation and objects and RPC.
- Introduce the idea of peer to peer services and file system
- Methods of understanding clock synchronization protocols &replication
- Understand the issues involved in studying process and resource management

Course Outcomes (COs):
- Discuss trends in Distributed Systems
- Demonstrate an understanding of the challenges faced by future distributed systems
- Learn and apply the concept of network virtualization and remote method invocation
- Apply network virtualization in Real time systems like
- Analyze the mechanism of peer to peer systems, DFS and DNS.
- Understand key mechanisms and models for distributed systems including logical clocks,
- Causality, distributed mutual exclusion, distributed deadlocks.
- Design process and resource management systems.

UNIT-I
Concepts of Distributed Systems: Introduction, Goals of Distributed Systems, Examples of distributed Systems Distributed

Theoretical Foundation for Distributed System : Limitation of Distributed system, absence of global clock, shared memory, Logical clocks, Lamport's & vectors logical clocks.

UNIT-II
Distributed Mutual Exclusion: Classification of distributed mutual exclusion, requirement of mutual exclusion theorem, Token based and Non Token based algorithms.

Distributed Deadlock Detection: system model, resource Vs communication deadlocks, deadlock prevention, avoidance, detection & resolution, centralized dead lock detection, distributed dead lock

detection, path pushing algorithms, edge chasing algorithms.

UNIT-III

Agreement Protocols: Introduction, System models, classification of Agreement Problem, Byzantine agreement problem, Consensus problem.

Distributed Objects and Remote Invocation: Communication between distributed objects, Remote procedure call, Events and notifications.

UNIT-IV

Distributed File Systems: File service architecture, Sun Network File System, The Andrew File System.

Distributed Transactions: Flat and nested distributed transactions, Atomic Commit protocols, Concurrency control in distributed transactions, Distributed deadlocks, Transaction recovery

UNIT-V

Replication: System model and group communication, Fault-tolerant services, Transactions with replicated data. Distributed Algorithms: Destination based routing, APP (assignment problem in parallel), Deadlock free Packet switching, Introduction to Wave & traversal algorithms, Election algorithm.

Text Books:
1. Sinha P. K., "Distributed operating systems; Concepts and design", PHI Learning.
2. Mahajan S. & Shah, Distributed Computing, Oxford Press
3. Singhal & Shivaratri, "Advanced Concept in Operating Systems", McGraw Hill.
4. Tanenbaum and Steen, "Distributed systems: Principles and paradigms", 2nd edition, PHI Learning.
5. Coulouris, Dollimore, Kindberg, "Distributed System: Concepts and Design", Pearson Ed.
6. Gerald Tel, "Distributed Algorithms", Cambridge University Press.

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COURSE CODE	CATEGORY	COURSE NAME	L	T	P	CREDITS	THEORY END SEM University Exam	THEORY Two Term Exam	THEORY Teachers Assessment*	PRACTICAL END SEM University Exam	PRACTICAL Teachers Assessment*
MCA312	Elective-II	Data Mining and Warehousing	4	0	0	4	60	20	20	0	0

Legends:L -Lecture; T -Tutorial/Teacher Guided Student Activity; P –Practical; C -Credit; Q/A – Quiz/Assignment/Attendance, MST -Mid Sem Test.
*Teacher Assessment shall be based on following components: Quiz/Assignment/Project/Participation in class (Given that no component shall be exceed 10 Marks)

Course Educational Objectives (CEOs):
- To familiarize the students with the need and scope of the subject.
- To build the mental makeup of the students for the field of data mining
- To develop a better understanding of the recent techniques like Support Vector Machine, Rough Set Theory etc as the tools of data mining.
- Using simple and well drawn illustrations develop students skills to discover knowledge to support the decision making process.
- To make the students well versed with the latest trends in data warehousing and data mining.

Course Outcomes (Cos): The student will be able to
- Understand the basic principles, concepts and applications of data warehousing and data mining
- introduce the task of data mining as an important phase of knowledge recovery process
- Ability to do Conceptual, Logical and Physical design of Data Warehouses, OLAP applications and OLAP deployment
- Have a good knowledge of the fundamental concepts that provide the foundation of data mining
- Design and implement a data warehouse or data mart to present information needed by management in a form that is usable for management client
- Design and implement the data pre-processing solutions for different applications
- Identify and use suitable data mining techniques for Knowledge Discovery
- Develop dashboard solutions for presentation of knowledge
- Explore the subject to start as a researcher

UNIT –I
Motivation, importance, Data types for Data Mining: Relation Databases, Data Warehouses, Transactional databases, Advanced Database System and its applications, Data mining functionalities: Concept/Class description, Association Analysis, Classification & Prediction, Cluster Analysis, Outlier Analysis, Evolution Analysis, Classification of Data Mining Systems, Major Issues in Data Mining.

UNIT –II
Data Warehouse and OLAP Technology for Data Mining: Differences between Operational Database Systems and Data Warehouse, a multidimensional Data Model, Data Warehouse Architecture, Data Warehouse Servers, Implementation of Vidata Warehouse, Data Cube Technology.

UNIT-III
 Data Pre-processing: Problems with real world data, data pre-processing as a process, Data Cleaning, Data Integration and Transformation, Data Reduction, Discretization and Concept Hierarchy Generation. Data Mining Primitives, Languages and System Architectures, Concept Description: Characterization and Comparison, Analytical Characterization.

UNIT –IV
 Mining Association Rules in Large Databases: Association Rule Mining: Market Basket Analysis, Basic Concepts, Mining Single-Dimensional Boolean Association Rules from Transactional Databases: different algorithms, the Apriori, Partition, Dynamic Itemset Counting, pincer search, FP tree Growth, Generating Association rules from Frequent items, Improving the efficiency of Apriory, Mining Multilevel Association Rules, Multidimensional Association Rules, Constraint-Based Association Mining.

UNIT –V
 Classification, Prediction and Cluster Analysis: Issues regarding classification and prediction, Different Classification and Clustering Methods, Cluster Analysis, Applications and Trends in Data Mining: Data Mining Applications, currently available tools.

Text Books:
1. J. Han and M. Kamber, 'Data Mining: Concepts and Techniques', Morgan Kaufmann Pub.
2. Berson, 'Data Warehousing, Data Mining and OLAP', TMH.
3. W.H. Inmon, 'Building the Data Warehouse', Wiley India.
4. Anahory, 'Data Warehousing in Real World', Pearson Education.
5. Adriaans, 'Data Mining', Pearson Education.
6. A.K. Pujari, 'Data Mining Techniques', University Press, Hyderabad.

COURSE CODE	CATEGORY	COURSE NAME	L	T	P	CREDITS	THEORY END SEM University Exam	THEORY Two Term Exam	THEORY Teachers Assessment*	PRACTICAL END SEM University Exam	PRACTICAL Teachers Assessment*
MCA322	Elective-II	Cryptography and Information Security	4	0	0	4	60	20	20	0	0

Legends: L – Lecture; T – Tutorial/Teacher Guided Student Activity; P – Practical; Q/A – Quiz/Assignment/Attendance; MST – Mid Semester Test.
*Teacher Assessment shall be based on following components: Quiz/Assignment/Project/Participation in class activities, given that no component shall exceed more than 10 marks

Course Education Objectives (CEOs):
1. To learn about different Cryptography Encryption and Decryption Technique.
2. To understand the concepts of various asymmetric and symmetric algorithms.
3. To understand the different aspects of Information Security and other security areas.

Course Outcomes (COs): Upon completion of the subject, students will be able to:
- Explain concepts of cryptography and ciphers.
- Describe advance encryption techniques and algorithms.
- Understand the key exchange protocols.
- Define information systems and its related security aspects.
- Explore different types of security including network, computer, internet security.

Unit-I
Cryptography: Concepts & Techniques: Introduction, Plaintext & Cipher text, Creaser Cipher, Substitution Techniques, Substitution Boxes (SBoxes), Permutation Cipher, Transposition Techniques, Encryption & Decryption, Symmetric and Asymmetric key Cryptography, Key Range & Key Size.
Unit-II
Symmetric Key Algorithm: Introduction of Block Ciphers, Overview of Symmetric Key Cryptography, DES (Data Encryption Standard) algorithm, Double DES Triple DES, AES, IDEA (International Data Encryption Algorithm) algorithm.

Unit-III
Asymmetric Key Algorithm: Overview of Asymmetric key Cryptography, RSA algorithm, Symmetric & Asymmetric key Cryptography together, Diffie-Hellman Key Exchange, Digital Signature, Basic concepts of Message Digest and Hash Function. Man in Middle Attack, DoS and DDoS Attacks.
Unit-IV
Information Security: Introduction of Information System, Functions and Types of Information System, Information System Threats and Attacks Defined, Security Services, Information System Security and control, Cyber Crime and Information Security
Unit-V
Other Security: Threats in Network, Network Security, Attacks on Computer, Computer Security,

Network Access Control and Cloud Security, Transport- Level Security, Wireless Network Security, Electronic Mail Security, IP Security.

Text Books:
1. William Stallings, "Cryptography and Network Security: Principles and Practice", Sixth Edition, Pearson Education, 2013.
2. C. Kaufman, R. Perlman and M. Speciner, "Network Security: Private Communication in a Public World", Second Edition, Pearson, 2016.
3. Atul Kahate, "Cryptography & Network Security", Third Edition, McGraw Hill Education, 2017.
4. Gaurav Gupta, Sarika Gupta "Information Security and Cyber Laws", First Edition, Khanna Publishing, 2019

References:
1. Wenbo Mao, "Modern Cryptography: Theory and Practice", First Edition, Prentice Hall, 2003.
2. William Stallings, "Network Security Essentials: Applications and Standards", Sixth Edition, Pearson Education, 2018.
3. Douglas R. Stinson, M. Paterson, "Cryptography: Theory and Practice", Fourth Edition, CRC Press, 2018.
4. Elizabeth D. Zwicky, Simon Cooper, D. Brent Chapman, "Building Internet Firewalls", Second Edition, O'Reilly, 2000.
5. http://nptel.ac.in/

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MBAI104 ORGANIZATIONAL BEHAVIOR

SUBJECT CODE	SUBJECT NAME	TEACHING & EVALUATION SCHEME									
		THEORY			PRACTICAL			L	T	P	CREDITS
		END SEM University Exam	Two Term Exam	Assessment*	End Sem University Exam	Assessment*					
MBAI104	Organizational Behavior	60	20	20	-	-		4	-	-	4

Legends: L - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical; **C** - Credit;
*Teacher Assessment shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

Course Objective

The objective of the course is to familiarize the students with Organisational, Group and Individual Behaviour. The course also educates the students the concept and theories of Motivation, Leadership and Teamwork.

Examination Scheme

The internal assessment of the students' performance will be done out of 40 Marks. The semester Examination will be worth 60 Marks. The question paper and semester exam will consist of two sections A and B. Section A will carry 36 Marks and consist of five questions, out of which student will be required to attempt any three questions. Section B will comprise of one or more cases / problems worth 24 marks.

Course Outcomes

1. To describe human behavior and that of others in an organizational setting.
2. To examine important aspects of group/team processes and manage them.
3. To demonstrate ability to manage, lead and work with other people in the organization.

COURSE CONTENT

Unit I: Introduction to Organizational Behavior (OB)

1. Definition, Contributing Disciplines to the OB field, Levels of OB
2. Models of Organisational Behavior
3. Challenges and Opportunities for OB
4. OrganisationalBehaviour in Global Context

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Unit II: Determinants of Individual Behavior
1. Personality - Concept, Determinants, Personality Traits (MBTI & Big Five); Major Personality Attributes Influencing OB.
2. Perception – Factors Affecting Perception, Attribution Theory, Errors in Perception
3. Attitude - Formation, Components of Attitudes, Types
4. Learning - Concept, Theories - Classical Learning, Operant Learning and Social Learning and Managerial Implications

Unit III: Motivation and Leadership
1. Motivation: Concept and Process
2. Theories of Motivation: Need Hierarchy Theory, Two Factor Theory, Victor Vroom Theory, Equity Theory, Organisational Justice, Application of Motivational Theories
3. Leadership: Meaning and Styles
4. Leadership Theories: Trait Theory, Behavioral Theories- Managerial Grid, Situational Theories-Fiedler's Model and Hersey-Blanchard Model

Unit IV: Group Behavior and Conflict Management
1. Groups and Team: Concept, Classification, Life Cycle of a Team, Building effective Teams
2. Conflict: Meaning, Level, Sources, Model of Conflict Resolution.
3. Interpersonal Orientations: Transactional Analysis, Stroking

Unit V: Organisation Culture, Stress and Change Management
1. Organisational Culture: Concept, Creating and Sustaining Culture, OB Across Cultures
2. Change : Concept, Forces for Change, Resistance to Change, Approaches to Managing Change
3. Stress: Concept, Causes, Approaches to Stress Management
4. Issues between Organisations and Individuals.

Suggested Readings
1. Stephens, R.,Judge, T. and Sanghi, S. (2011).*Organizational Behavior*. Pearson Education India, Latest Edition.
2. Newstorm, J. (2007). *Positive Organizational Behavior*. Sage Publications, 12 Edition.
3. Hitt, Millar, Colella (2006). *Organizational Behavior: A Strategic Approach*. John Wiley and Sons, Latest Edition.
4. Dwivedi R. S. (2001). *Human Relations and Organizational Behavior: A Global Perspective*. Macmillan, Latest Edition.
5. Greenberg, J. and Baron, R. (2008). *Behavior in Organizations*. Pearson Prentice Hall, Latest Edition.

COURSE CODE	CATEGORY	COURSE NAME	L	T	P	CREDITS	TEACHING & EVALUATION SCHEME				
							THEORY			PRACTICAL	
							END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*
MCBT 302	Compulsory	Mobile Operating System	3	0	4	5	60	20	20	30	20

Legends: L – Lecture; T – Tutorial/Teacher Guided Student Activity; P – Practical; Q/A – Quiz/Assignment/Attendance; MST – Mid Semester Test.

*Teacher Assessment shall be based on following components: Quiz/Assignment/Project/Participation in class activities, given that no component shall exceed more than 10 marks.

Course Education Objectives (CEOs):

- To understand the fundamentals of Mobile communication systems.
- To understand the different multiplexing scheme.
- To understand the significance of different layers in mobile system.

CourseOutcomes(COs): Afterthesuccessfulcompletionofthiscoursestudentswillbeableto

- Understand the concepts of mobile and wireless communications.
- Applytheknowledgegainedinexploring,applicationandprotocoldevelopment.
- Understand methods and tools used in Mobile Operating Systems.
- DevelopknowledgeandskillsofapplicationdesignofMobileOperatingSystems.

Unit-I

Introduction to wireless network, mobile and cellular mobile telephone systems, analog and digital cellular systems, Networking Applications and Mobile Technology, Wireless/Direct cable, Limitations of mobile access, Private and public networks, trusted versus untrusted connections,Roaming,SecurityconsiderationswhenusingVirtualPrivateNetworks,IPSecand SSL, frequency reuse, co-channel interference.

UNIT II

Evolution of Modern Mobile Wireless Communication System-First Generation Wireless Networks, Second Generation (2G) Wireless Cellular, Networks, Major 2G standards, *2.SG* Wireless Networks, Third Generation 3G Wireless, introduction to MAC, SDMA, FDMA, TDMA, CDMA, Hand offs and dropped calls-initiation of handoff, power difference, mobile assisted cell-site and Intersystem handoff.
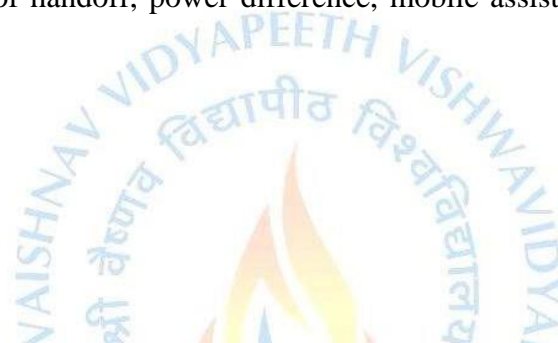
UNIT III

MobileTelecommunicationstandards,GSMArchitectureandProtocols,GeneralPacketRadio Services:(GPRS)NetworksArchitecture,GPRSInterfacesandReferencePoints,GPRSLogical   Channel, GPRS   Mobility   Management   Procedures,   GPRS   Attachment   and   Detachment, introductiontoDECT,TETRA,IMT-2000,CTEO,satellitesystems—GEO,LEOandMEO,and   broadcast systems —Digital audio and videobroadcasting.

UNIT IV

Network support for mobile systems, Mobile IP introduction, IP packet delivery, MIPV4 and MIPv6, Tunneling, and Reverse Tunneling MIPv4, MIPv4 Route Optimization, Mobility Management Issues, Role of IP on Wireless Networks IP for GPRS.

UNIT V

Switched Domain Protocol Stacks, Role of Interfaces, Interface and Mobility Management, Packet routing and transport of user data in UMTS, Mobile transport and application layer protocol, GTP Tunnel, WWW, WAP, Configuring PDP Addresses on Mobile Stations.

Text Books:

1. Barry Burd, John Paul Mueller, "Android Application development all in one for Dummies", Third Edition, Wiley publication, 2020.
2. William Stallings, "Operating Systems Internals And Design Principles 9th Edition, PEARSON Publication, 2018.
3. Andrew Tanenbaum, Herbert Bos, "Modern Operating Systems ", Pearson publication, 4th Edition 2014
4. ArashHabibiLashkari, MohammadrezaMoradhaseli, "Mobile Operating Systems and Programming", VDM Verlag Publications, 2011.

Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

MBA–INTERNATIONAL BUSINESS III SEMESTER (20-22)

MBAI 301C ADVANCED HUMAN VALUES AND PROFESSIONAL ETHICS

SUBJECT CODE	SUBJECT NAME	TEACHING & EVALUATION SCHEME						L	T	P	CREDITS
		THEORY			PRACTICAL						
		END SEM University Exam	Two Term Exam	Teachers Assessme nt*	END SEM University Exam	Teachers Assessme nt*					
MBAI301C	Advanced Human Values and Professional Ethics	60	20	20	-	-		4	-	-	4

Legends: L - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical;   **C** - Credit;
*Teacher Assessment shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

Course Objective
The objective of the course is to disseminate the theory and practice of moral code of conduct and familiarize the students with the concepts of "right" and "good" in individual, social and professional context

Examination Scheme
The internal assessment of the students' performance will be done out of 40 Marks. The semester Examination will be worth 60 Marks. The question paper and semester exam will consist of two sections A and B. Section A will carry 36 Marks and consist of five questions, out of which student will be required to attempt any three questions. Section B will comprise of one or more cases / problems worth 24 marks.

Course Outcomes
1. Help the students to understand right conduct in life.
2. To equip students with understanding of the ethical philosophies, principles, models that directly and indirectly affect personal and professional life.

COURSE CONTENT

Unit I: Inculcating Values at Workplace
1. Values: Concept, Sources, Essence
2. Classification of Values.
3. Values in Indian Culture and Management: Four False Views, Value Tree
4. Eastern and Western Values; Values for Global Managers

Unit II: Professional Ethics
1. Ethics: Concept, Five P's of Ethical Power, Organisational Tools to Cultivate Ethics
2. Theories of Ethics: Teleological and Deontological
3. Benefits of Managing Ethics in an Organisation
4. Ethical Leadership

Unit III: Indian Ethos and Management Style
1. Indian Ethos and Workplace
2. Emerging Managerial Practices
3. Ethical Considerations in Decision Making and Indian Management Model
4. Core Strategies in Indian Wisdom and Ethical Constraints

Unit IV: Human Behavior – Indian Thoughts
1. Guna Theory
2. Sanskara Theory
3. Nishkama Karma
4. Yoga: Types, Gains; Stress and Yoga

Unit V: Spirituality and Corporate World
1. Spirituality: Concept, Paths to Spirituality
2. Instruments to achieve spirituality
3. Vedantic Approach to Spiritual and Ethical Development
4. Indian Spiritual Tradition.

Suggested Readings
1. Kausahl, Shyam L. (2006). *Business Ethics – Concepts, Crisis and Solutions*. New Delhi: Deep and Deep Publications Pvt. Limited
2. Murthy, C.S.V. (2012). *Business Ethics –Text and Cases*. Himalaya Publishing House: Mumbai
3. Chakraborty, S. K. (1999). *Values and Ethics for Organizations*. Oxford university press
4. D.Senthil Kumar and A. SenthilRajan (2008). *Business Ethics and Values*. Himalaya Publishing House: Mumbai