Programme Outcomes, Programme Specific Outcomes and Course Outcomes of MBA program

Outcome Based Education (OBE) Approach:

Outcomes are about performance, and this implies:

a) There must be a performer – the student (learner), not only the teacher

b) There must be something performable (thus demonstrable or assessable) to perform

c) The focus is on the performance, not the activity or task to be performed

Programme Outcomes (POs): Programme Outcomes are a set of narrow statements that describes what students (learners) of the programme are expected to know and be able to perform or attain by the time of graduation.

Programme Specific Outcomes (PSOs): Programme Outcomes are a set of narrow statements that describes what students (learners) of a particular specialization of the programme are expected to know and be able to perform or attain by the time of graduation. PSOs are also a function of the various course combinations offered by the Institute.

Programme Outcomes (POs):

At the end of the MBA programme the learner will possess the

1. **Generic and Domain Knowledge** - Ability to articulate, illustrate, analyze, synthesize and apply the knowledge of principles and frameworks of management and allied domains to the solutions of real-world complex business issues
2. **Problem Solving & Innovation** - Ability to Identify, formulate and provide innovative solution frameworks to real world complex business and social problems by systematically applying modern quantitative and qualitative problem solving tools and techniques.
3. **Critical Thinking** - Ability to conduct investigation of multidimensional business problems using research based knowledge and research methods to arrive at data driven decisions
4. **Effective Communication** - Ability to effectively communicate in cross-cultural settings, in technology mediated environments, especially in the business context and with society at large

5. **Leadership and Team Work** - Ability to collaborate in an organizational context and across organizational boundaries and lead themselves and others in the achievement of organizational goals and optimize outcomes for all stakeholders.

6. **Global Orientation and Cross-Cultural Appreciation**: Ability to approach any relevant business issues from a global perspective and exhibit an appreciation of Cross Cultural aspects of business and management.

7. **Entrepreneurship** - Ability to identify entrepreneurial opportunities and leverage managerial & leadership skills for founding, leading & managing startups as well as professionalizing and growing family businesses.

8. **Environment and Sustainability** - Ability to demonstrate knowledge of and need for sustainable development and assess the impact of managerial decisions and business priorities on the societal, economic and environmental aspects.

9. **Social Responsiveness and Ethics** - Ability to exhibit a broad appreciation of the ethical and value underpinnings of managerial choices in a political, cross-cultural, globalized, digitized, socio-economic environment and distinguish between ethical and unethical behaviors & act with integrity.

10. **Life Long Learning** – Ability to operate independently in new environment, acquire new knowledge and skills and assimilate them into the internalized knowledge and skills.

Graduate Attributes (GAs):

At the end of the MBA programme the learner shall exhibit:

GA1: Managerial competence

GA2: Proficiency in Communication, Collaboration, Teamwork and Leadership

GA3: Competence in Creativity & Innovation

GA4: Research Aptitude, Scholarship & Enquiry

GA5: Global Orientation

GA6: Proficiency in ICT & Digital Literacy

GA7: Entrepreneurship & Intrapreneurship Orientation

GA8: Cross-functional & Inter-disciplinary Orientation

GA9: Results Orientation

GA10: Professionalism, Ethical, Values Oriented

Specializations offered:

The following specializations shall be offered as MAJOR / MINOR:

1. Marketing Management (MKT)
2. Financial Management (FIN)
3. Human Resources Management (HRM)
4. Operations & Supply Chain Management (OSCM)
5. Business Analytics (BA)

The following specializations shall be offered ONLY as MINOR Specializations:

1. Rural & Agribusiness Management (RABM)
2. Pharma & Healthcare Management (PHM)
3. Tourism & Hospitality Management (THM)

Course Outcomes (COs):

A set of specific statements that describes the complex performances a student should be capable of as a result of learning experiences within a course.

A sample of course outcomes of **Basics of Marketing**:

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO105.1	REMEMBERING	DEFINE the various concepts, terms in marketing and the various company orientations towards the market place.
CO105.2	UNDERSTANDING	CLASSIFY the various components of the marketing environment of a firm and
CO105.3	APPLYING	APPLY principles of segmentation, targeting and positioning to real world
CO105.4	ANALYSING	BREAKDOWN the consumer buying behavior journey into various components and DISTINGUISH between various buying roles for a real world marketing offering (commodities, goods, services, e-products/ e-services.)
CO105.5	EVALUATING	DEVELOP and EXPLAIN the marketing mix for real world marketing offering (commodities, goods, services, e-products/ e-services.)
CO105.6	CREATING	ELABORATE on the various types of Product Life Cycles and RELATE them with the marketing mix in the context of real world marketing offering (commodities, goods, services, e-products/ e-services.).

Similar Course Outcomes are prepared for different courses included in the MBA Program.

Programme Outcomes, Programme Specific Outcomes and Course Outcomes of MCA program

The Teaching-Learning process being the back bone of any academic institution, SIBAR gives utmost importance to the teaching learning process. The faculty members concentrate on teaching in addition to research and extension services and have evolved the best possible strategies and teaching pedagogy to facilitate students' learning. The learning outcomes are clearly defined as per Savitribai Phule Pune University (SPPU). These outcomes are influential in achieving the mission and objectives of the Institute as well as University.

The learning outcomes clearly describe the knowledge, skills, and competencies that students are expected to acquire as a result of completing their course. The outcomes are assessed and measured to identify the extent to which goals are accomplished. The gaps identified after the analysis are addressed through the properly laid action plan The assessment plan for outcomes also specifies the performance targets/criteria (measurable objectives) that are used by the domain to determine the extent to which the programme learning outcomes are being achieved

The assessment of student learning outcomes is done by using through assignments, class tests, viva, and internal examination scheme. Assessment methodology/tools are decided keeping in mind the parameters/learning outcomes to be measured and the desired emphasis during the delivery of a programme as prescribed in the course curriculum.

Following are the MCA Program Outcomes designed:

Institute has clearly defined learning outcomes on web portals shared to faculty, students and parents. Learning outcomes are notified and made available on website.

Programme Outcomes (MCA)

1. Student completing MCA program is a skilled resource, suitable for employment in IT industry both domestically and globally.
2. Students are competent enough in theoretical knowledge and practical skills, required for identifying, analyzing, formulating and developing computer applications to solve complex business problems.
3. Attainment of entrepreneurial skills required for new start-ups.
4. Development of an attitude for perpetual professional and societal development.
5. Professionals achieving peer-recognition as an individual or in a team exhibiting excellent technical and managerial skills.

Program Specific Outcome (MCA)

1. Learning of mathematics and computing fundamentals useful for various real life applications in order to provide simple, optimal and automated solutions for decision making.
2. Acquisition of knowledge about the technologies like Java, .NET, PHP, Mobile Computing and other internet technologies to develop commercial e-commerce websites, android applications, electronic trading platforms, gaming applications and digital advertising.
3. Competency in database concepts and data analytics for implementation in design and administration useful for policy making, cost reduction, faster and better decision making, developing new products and services.
4. Acquisition of knowledge about networking useful in network administration and application development.
5. Competency in operating system concepts beneficial for being good system administrators and OS developers of various gadgets.
6. Well versed with machine learning, image processing, graphic design applications and intelligent games by learning ‘Python’.

7. Expertise in Cloud environment makes student to handle the challenges and opportunities in the technologies like SaaS, PaaS, IaaS.
8. Competent software developers groomed through software engineering and software project management.

Course outcomes Outcome (MCA)

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Semester-I

Course:	**IT11: Fundamental of Computers**
CO1	Students will be able to understand the basics of computer hardware and how software interacts with computer hardware
CO2	Students will be able to analyze and evaluate computer performance
CO3	Students will be able to understand how computers represent and manipulate data
CO4	Students will be able to understand computer arithmetic operations and convert between different number systems
CO5	Students will be able to analyze various types of memories and effective utilization of it.

Course:	**IT12: C Programming with Data structure**
CO1	Students will be able to understand the different basic fundamental of C programming
CO2	Students will be able to develop Programming logic and use of programming instructions, syntax and programme structure.
CO3	Students will be able to demonstrate use of data types, operators, keywords, functions, structures, file handling etc.
CO4	Students will be able to understand and demonstrate the concept of Exception Handling.
CO5	Students will be able to apply pointers, array and dynamic memory allocation functions in practice.
CO6	Students will be able to create a stack and queue based applications using Array and apply data searching, sorting techniques

Course:	**IT13: Software Engineering**
CO1	Students will be able to identify process model for given Problem
CO2	Students will be able to formulate project plan and apply estimation techniques.
CO3	Students will be able to describe the basic concept of software engineering used in IT industry and
CO4	Students will be able to evaluate quality of software and its maintenance.

Course:	**IT14: Database Management System**
CO1	Students will be explain the features of database management systems and relational database.

CO2	Student will be able to learn to write different SQL queries on relational database.
CO3	Student will be able to understand transaction concept of database.
CO4	Student will be able to design the database structure by applying the concepts of Entity-relational model and Normalization.
CO6	Students will be able to demonstrate the principles behind systematic database design approaches by
CO7	Studenst will be explore the different concepts relared to database sucrity and access control
CO8	Students will be able to design the different applications based on the concepts of transaction management, recovery techniques.

Course:	**BM11: Principles and Practices of Management and Organizational Behavior**
CO1	Student will able to understand the basic concepts of management.
CO2	Student will able to apply various models, types of decisions and tools to take decisions in different situations.
CO3	Student will able to demonstrate the use of management functions in the organization
CO4	Student will able to learn various personal factors which influence individual behavior, impact of other factors.
CO5	Student will able to discover and comprehend the various theories of motivation.
CO6	Student will able to know the individual process in organization such as learning, perception, attribution and individual differences.
CO7	Student will able to understand and analyze human behavior in the work place, from individual, group and organization perspectives
CO8	Student will able to discover and understand the concept of leadership, power and politics and conflict resolution.

Course	**BM12: Business Process Domain**
CO1	Students will be able to learn & understand the processes and practices in business and their applications.
CO2	Students will be able to introduce advance business applications like CRM and SCM
CO3	Students will be able to Explore & analyze financial aspects of business
CO4	Students will be able to learn and analyze the financial statements of a business.

Semester-II

Course:	**IT21: Essentials of Operating System I**
CO1	Students will be able to demonstrate the knowledge of basics of Operating System
CO2	Students will be able to understand functions, structures and history of operating systems
CO3	Students will be able to explore Concepts of memory management including virtual memory
CO4	Students will be able to compare and analyze different operating systems being used in real world.

CO5	Students will be able to apply the knowledge memory management, file management, process management.
CO6	Students will be able to learn protection and security mechanisms in various types of operating systems

Course:	**IT22: Web Technologies**
CO1	Students will be able to understand, analyze and apply the role of markup languages like HTML& CSS
CO2	Students will be able to understand and create client-side based application using Javascript.
CO3	Students will be able to understand, analyze and build dynamic web pages using classic ASP.
CO4	Students will be able to design dynamic and interactive web pages by embedding JavaScript code in
CO5	Students will be able to design a well formed / valid XML document
CO6	Students will be able to Create a server side ASP application using database

Course:	**IT23: Core Java**
CO1	Students will be able understand the concepts of Object Oriented Programming and apply it to the real
CO2	Students will be able to implement a solution for multidimensional Array problem.
CO3	Students will be able to develop standalone Applications using Swing and AWT package in Java
CO4	Students will be able to implement multi tasking using multi threading concept
CO5	Students will be able to use visual tools to produce well designed, effective applications and applets
CO6	Students will be able to create a File handling applications.

Course:	**IT24: Essentials of Networking**
CO1	Students will be able to understand the concepts of basic computer networks.
CO2	Students will be able to identify the different types of network devices and their functions within a
CO3	Students will be able to understand and demonstrate the Common Network Architecture, Connection
CO4	Students will be able to understand and compare the functions of OSI Reference Model and TCP/IP protocol.
CO5	Students will be able to learn conceptual knowledge of IP Addressing & Routing.
CO6	Students will be able to understand and demonstrate Local Area Network and Broadband Network

Course:	**MT21: Discrete Mathematics**
CO1	Students will able understand mathematical reasoning and basic logic statements in order to read,
CO2	Student will able to understand how to work with discrete structures, which are the abstract
CO3	Students will be able to apply algorithms of discrete structures such as tree to solve complex problems.
CO4	Students will be able to construct their own models of graphs to simplify or solve practical problems.
CO5	Student will able to realize the basic nature, relation and applicability of discrete objects and apply
CO6	Student will able to identify the limitations of different discrete mathematical structures.

Course:	**BM21: Essentials of Marketing**

CO1	Students will be able to understand the essentiality of Marketing in business Environment
CO2	Studnts will be able to discuss marketing mix, market segmentation and E-Marketing in the view of IT product and services.
CO3	Students will be able to differentiate between Organizational Buying behavior and consumer buying
CO4	Students will be able to construct a buyer decision process
CO5	Students will be able to designing Segments and Target Online Customers for any particular product
CO6	Students will be able to appraise the Differentiation and Positioning Strategies of any particular

Semester-III

Course:	**MTC31: Probablity and Combinatorics**
CO1	Students will be able to apply counting strategies to solve varied problems involving permutations, combinations, distributions, and partitions
CO2	Students will be able to write combinatorial proofs of combinatorial identities
CO3	Students will be able to apply counting principles to determine probabilities.
CO4	Students will be able to compute probabilities and conditional probabilities in appropriate ways.
CO5	Students will be able to solve problems involving the discrete and continuous distributions.
CO6	Students will be able to understand applications of discrete and continuous distributions.

Course:	**ITC31: Multimedia Tools for Presentation**
CO1	Student will able tounderstand various Multimedia tools & software for effective Presentation
CO2	Student will able to apply a wide range of relevant digital applications for creating digital
CO3	Student will able to explore the use of multimedia and virtual applications in fashion presentations.
CO4	Student will able to design, manage and execute professional presentations and publish a presentation
CO5	Student will able to prepare Presentation by using PowerPoint, Adobe Photoshop, Flash tools, etc.
CO6	Student will able to create Presentation using open source tools

Course:	**T1-IT31: Advanced Data Structure & C++ Programming**
CO1	Students will be able understand the concepts of Object Oriented Programming and apply it to the real
CO2	Students will be able to design solutions using friend function and Operator Overloading.
CO3	Students will be able to identify a solution for real world problems of maintaining Database through
CO4	Students will be able to understand and demonstrate the concept of Exception Handling.
CO5	Students will be able to develop Applications using various data structures.
CO6	Students will be able to create a Tree and Graph based applications using Linked List.

Course:	**T1-IT32: Design and Analysis of Algorithm**
CO1	Student will be able to solve the problem using mathematical abilities.
CO2	Students will be able to identify the complexity of the algorithms.
CO3	Student will be able to find optimal solution by applying various methods.
CO4	Students will be able to apply the knowledge of Dynamic programming to solve real world problems
CO5	Students will be able to understand and demonstrate the concept of Backtracking and Brach and

CO6	Students will be able to use research based knowledge to design and understand the concepts of NP-

Course:	**T1-IT33: Object Orietnted Analysis and Design**
CO1	Students will be able to extract system's requirements using a use-case driven approach.
CO2	Students will be able to define a set of extensible, reusable software classes for the problem domain.
CO3	Students will be able to define a set of candidate classes that suitably model a problem domain.
CO4	Students will be able to build interaction diagrams that define the interactions among the objects that are required to achieve the desired Students will be able to effectively document all phases of the software process using UML.
CO5	Students will be able to apply an iterative and incremental approach to construction of software systems and components.

Course:	**T1-IT34: Advanced Internet Technologies**
CO1	Students will be able to understand and apply the role of markup languages like HTML5 and CSS3
CO2	Students will be able to create , adapt and apply appropriate techniques to develop client-side and server side
CO3	Students will be able to understand, analyze and build dynamic web pages using server-side
CO4	Students will be able to develop effective functionality with the help of individual and as a member
CO5	Students will be able to understand and demonstrate the concept of Angular- Js.
CO6	Students will be able to design and evaluate projects based on the specified requirements.
CO7	Students will be able to identify the principles of coherent web coding and good visual design.

Semester-IV

Course:	**MTC41: Optimization Techniques**
CO1	Students will able understand basic concepts of Linear programming.
CO2	Students will be able to formulate operation research models to solve real life problem
CO3	Students will be able to apply the techniques used in optimization techniques to solve real life problem and find the optimum solution
CO4	Students will be able to proficiently allocate scarce resources to optimize the solution
CO5	Students will be able to determine critical path analysis to solve real life project scheduling time and timely delivery
CO6	Students will be able to use critical path analysis and programming evaluation and review techniques for timely project scheduling and completion.

Course:	**ITC42: Research Methodology and Statistical Tools**
CO1	Students will be able to understand research terminology and ethical principles of research.
CO2	Students will be able to describe quantitative, qualitative and mixed methods approaches to research.
CO3	Students will be able to understand the whole process of designing a research from its inception to its report.
CO4	Students will be able to code and interpret qualitative data.
CO5	Student will be able to interpret the results of statistical tests.

CO6	Students will know the criteria that might be used to evaluate a quantitative study and a qualitative study.
CO7	Students will be able to write aresearch proposal.

Course:	**T1-IT41: Advanced Java**
CO1	Students will be able understand the concepts of Network Programming and apply it to the real World.
CO2	Students will be able to identify a solution for real world problems of Database Programming.
CO3	Students will be able to develop Web Applications using Server Side Programming.
CO4	Students will be able to design solutions using Enterprise Java Beans.
CO5	Students will be able to understand and demonstrate the concept of Remote Method Invocations
CO6	Students will be able to create a Spring Framework based applications using modern tools.

Course:	**T1-IT42: Python programming**
CO1	Understand the basic concepts of Python programming
CO2	Student will be able to understand scripting and the contributions of scripting languages.
CO3	Student will be able to understand the Python especially the object-oriented concepts
CO4	Student will be able to code the built-in objects of Python,
CO5	Student will be exposed to advanced applications such TCP/IP network programming, multithreaded programming, Web applications.

Course:	**T1-IT43: Advance DBMS**
CO1	Students will be able to understand the needs and concepts of object-oriented database, spatial database, data warehousing and data mining.
CO2	Students will be able to analyze, design and evaluate the construct of various advanced databases such as object-oriented, object-relational and distributed databases for Geo-DBMS warehouses.
CO3	Students will be able to design and implement Advanced Database Systems.
CO4	Students will be able to design and conduct experiments, as well as to analyze and interpret data.
CO5	Students will be able to analyze and evaluate various algorithms based on data mining tools
CO6	Students will be able to describe the various techniques & operation associated with data warehouse.

Course:	**T1-IT44: Cloud Computing**
CO1	Students will be able to understand basic concepts about the cloud computing.
CO2	Students will be able to gain knowledge about various modules that gives students the skills and knowledge to understand how Cloud
CO3	Computing Architecture can enable transformation.
CO4	Students will be able to know how the Extension to Business development take place in market.
CO5	Students will be able to understand the Agility of cloud technology in an organization.

Semester-V

Course:	**ITC51: Software Project Management**
CO1	
CO2	Student will be able to identify project goals, constraints, deliverables, performance criteria, control needs, and resource requirements in consultation with stakeholders.
CO3	Student will be able to manage the scope, cost, timing, and quality of the project, at all times focused on project success as defined by project stakeholders.
CO4	Student will be able to Implement project management knowledge, processes, lifecycle and the embodied concepts, tools and techniques in order to achieve project success.
CO5	Student will be able to Utilize technology tools for communication, collaboration, information management, and decision support.
CO6	Student will be able to Implement general business concepts, practices, and tools to facilitate project success.

Course:	**T1-IT51: ASP.NET uisng C#**
CO1	Student will be able to solve the problems using c# language constructs.
CO2	Students will be able to apply the concepts of different server controls, validation controls.
CO3	Students will be able to understand, analyze and build dynamic web pages using server-side scripting
CO4	Students will be able to create the web services and apply it to the web applications.
CO5	Students will be able to understand and apply the concepts of error pages and security of web.
CO6	Students will be able to create the web based applications using Ajax Controls tools.

Course:	**T1-IT52: Service Oriented Architecture**
CO1	Students will be able to gain understanding of the basic principles of service orientation concepts and
CO2	Students will be able to learn service oriented analysis techniques.
CO3	Students will be able to learn technology underlying the service design.
CO4	Students will be able to learn advanced concepts such as service composition, orchestration and
CO5	Students will be able to know about various Web Service specification standards.
CO6	Students will be able to develop Applications using various WSDL and client.
CO7	Students will be able to create a Securing web services, Policy and SOAP messaging.

Course:	**T1-IT53: Big Data Analytics**
CO1	Students will be able to analyze the concepts of various Big data and its implication in Industry.
CO2	Students will be able to explore the concept and challenge of big data
CO3	Students will be able to apply the knowledge of Big Data Analytics to solve real world problems.
CO4	Students will be able to analyze the requirements for a Big Data Analytics System for a departmental/ organizational requirements
CO5	Students will be able to understand and demonstrate the concept of Map Reduce
CO6	Students will be able to understand and demonstrate the skills necessary for utilizing Hadoop framework
CO7	Students will be able to formulate an effective strategy to implement a successful Data analytics project

Course:	**T1-IT54: Mobile Application Development**
CO1	Student will be able to understand the architecture of Android
CO2	Student will be able to create Android application with Android Studio
CO3	Student will be able to access Android Hardware, sensors, bluetooth and wifi connections
CO4	Student will be able to access Location Based Services
CO5	Student will be able to use SQLite database with Android app
CO6	Student will be able to launching and publishing Android Application on Playstore

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Semester-I

Course:	**IT11: Problem Solving using C++**
CO1	Students will be able to use the algorithm paradigms for problem solving.
CO2	Students will be able to develop programs with features of the C++ programming language.
CO3	Students will be able to develop simple applications using C++.
CO4	Students will be able to develop programs in the UNIX/Linux programming environment.

Course:	**IT12: Software Engineering using UML**
CO1	Students will be able to distinguish different process model for a software development.
CO2	Students will be able to design software requirements specification solution for a given problem definitions of a software system
CO3	Students will be able to apply software engineering analysis/design knowledge to suggest solutions for simulated problems.
CO4	Students will be able to recognize and describe current trends in software engineering.

Course:	**IT13: Database Management System**
CO1	Students will be able to describe the basic concepts of DBMS and various databases used in real applications
CO2	Student will be able to design relational database using E-R model and normalization
CO3	Student will be able to demonstrate nonprocedural structural query languages for various database applications
CO4	Student will be able to apply concepts of Object Based Database, XML database and non-relational databases.
CO5	Student will be able to explain transaction management and recovery management for real applications.

Course:	**IT14: Essentials of Operating System**
CO1	Students will be able to understand structure of OS, process management and synchronization
CO2	Students will be able to analyze and design Memory Management
CO3	Students will be able to interpret the mechanisms adopted for file sharing in distributed Applications.
CO4	Students will be able to conceptualize the components and can do Shell Programming.
CO5	Students will be able to know Basic Linux System Administration and Kernel Administration

Course:	**BM11: Business Process Domain**
CO1	Students will be able to describe major bases for marketing mix in business.
CO2	Student will able to describe various functionalities of human resource process.
CO3	Student will able to identify existing e-commerce model and payment system
CO4	Student will able to apply knowledge to evaluate and manage an effective supply chain.
CO5	Student will able to understand how customer relations are related to business functions and its importance to the success of business entity
CO6	Student will able to use various banking and insurance process for business development.

Semester-II

Course:	**IT21: Data Structure and Algorithm**
CO1	Students will be able to apply design principles and concepts for Data structure and algorithm
CO2	Students will be able to create a stack and queue, linked list based applications using Array
CO3	Students will be able to summarize searching and sorting techniques.
CO4	Students will be able to describe stack, queue and linked list operation.
CO5	Students will be able to demonstrate the concepts of tree and graphs.

Course:	**IT22: Web Technology**
CO1	Students will be able to implement interactive web page(s) using HTML, CSS and JavaScript.
CO2	Students will be able to Build Dynamic web site using server-side PHP Programming and Database connectivity.
CO3	Students will be able to Design a responsive web site.

Course:	**MT21: Business Statistics**
CO1	Students will be able to Demonstrate concepts of business statistics (such as measures of central tendency, dispersion, correlation, regression analysis and time series analysis).
CO2	Students will be able to Students will be able to analyze and apply statistical tools to solve problems.
CO3	Students will be able to interpret the meaning of the calculated statistical indicators based on the acquired knowledge
CO4	Students will be able to demonstrate concept of index numbers for solving practical problems in business world.

Course:	**IT13: Essentials of Networking**
CO1	Students will be able to understand the concepts of data communication including the key aspects of networking and their interrelationship
CO2	Students will be able to understand various protocols such as HTTP, SMTP, POP3, IMAP, FTP, DNS, DHCP and the basic structure of IPv4, IPv6 Address and concept of sub netting with numerical
CO3	Students will be able toUnderstand routing concept and working of routing protocols such as RIP, OSPF and BGP
CO4	Students will be able to understand various encryption techniques.

Course:	**BM21: Principles and Practices of Management and Organizational Behavior**
CO1	Student will able to describe and analyze the interactions between multiple aspects of management.
CO2	Student will able to analyze the role of planning and decision making in Organization.
CO3	Student will able to justify the role of leadership qualities, Motivation Group dynamics and Team Building.
CO4	Student will able to compare the controlling process.