

PROGRAM OUTCOMES

MBA

The Program Outcomes (POs) for a **Master of Business Administration (MBA)** typically outline the competencies and skills that students are expected to develop during their studies. Here are some common **program outcomes for MBA programs**:

1. Strategic Thinking:

Develop and apply strategic thinking to solve business problems and make informed decisions that align with organizational goals.

2. Leadership and Management: Demonstrate effective leadership and management skills, including team building, motivation, and conflict resolution.

3. Financial Acumen:

Gain proficiency in financial analysis, budgeting, and financial management to make sound business decisions.

4. Marketing Expertise:

Understand and apply marketing principles to develop strategies that enhance market position and drive business growth.

5. Operational Efficiency:

Analyze and improve business operations to optimize performance, streamline processes, and enhance productivity.

6. Ethical and Responsible Decision-Making:

Incorporate ethical considerations and social responsibility into business decision-making and practices.

7. Global Perspective:

Understand global business environments and apply international business strategies to operate effectively in diverse markets.

8. Entrepreneurial Skills:

Develop entrepreneurial skills to identify opportunities, create business plans, and drive innovation.

9. Communication Skills:

Exhibit strong verbal and written communication skills to effectively convey ideas, negotiate, and present information to various stakeholders.

10. Analytical Skills:

Utilize data analysis and research methodologies to make evidence-based decisions and solve complex business problems.

11. Adaptability and Change Management:

Demonstrate the ability to adapt to changing business environments and manage organizational change effectively.

12. Collaboration and Teamwork:

Work collaboratively in teams to achieve common goals and leverage diverse perspectives for problem-solving and project execution.

These outcomes ensure that **MBA** graduates are well-prepared to take on leadership roles and contribute to organizational success across various industries.

Some **possible skills** gained through an MBA program:

- Advanced business knowledge and skills.

Strategic thinking and problem-solving skills.

- Leadership and management skills.
- Communication and interpersonal skills.
- Global business awareness and cultural competence.
- Entrepreneurial skills and mindset.
- Ethical and social responsibility awareness.
- Teamwork and collaboration skills.
- Adaptability and flexibility.

Career paths for individuals with an MBA degree include:

- Leadership roles in various industries.
- Management positions in business, finance, and consulting.
- Entrepreneurship and startup roles.
- Executive positions in government and non-profit organizations.
- Specialized roles in human resources, marketing, and operations.
- Career advancement opportunities in current field.
- Transition to new industry or field.
- Academic and teaching roles.



The Program Outcomes (POs) for a **Master of Computer Applications (MCA)** typically outline the skills and competencies students are expected to achieve upon completion of the program. Here are some **common outcomes for MCA programs**:

1. Advanced Knowledge:

Gain a deep understanding of core and advanced computer science concepts, including algorithms, data structures, software engineering, and database management.

2. Problem-Solving Skills:

Develop the ability to analyze complex computing problems, formulate solutions, and apply computational techniques effectively.

3. Software Development:

Demonstrate proficiency in designing, developing, and implementing software applications using various programming languages and development tools.

4. Research and Innovation:

Ability to conduct research in computer science, stay updated with emerging technologies, and contribute to innovative solutions in the field.

5. Professional Practices:

Exhibit professional and ethical conduct in computing practices, including understanding and adhering to legal, social, and ethical standards.

6. Teamwork and Communication:

Work effectively in teams, communicate technical information clearly, and collaborate with stakeholders to meet project requirements and goals.

7. Project Management:

Apply project management principles to plan, execute, and manage software projects efficiently.

8. Critical Thinking:

Enhance critical thinking skills to evaluate and improve existing systems, processes, and solutions.

9. Adaptability:

Adapt to new technologies and trends in the computing industry and continue learning throughout their professional careers.

10. User-Centric Design:

Develop solutions with a focus on user needs, ensuring usability and accessibility in software applications.

These outcomes ensure that **MCA** graduates are well-equipped to handle the challenges of the IT industry and contribute effectively to their field.

Some **possible skills** gained through an MCA program:

- Advanced computer science knowledge
- Software development skills
- Programming skills in various languages
- Computer systems and networks knowledge
- Cybersecurity awareness
- Data analytics and database management skills
- Web and mobile app development skills
- Cloud computing knowledge
- Project management and teamwork skills
- Ethical and social awareness

Career paths for individuals with an MCA degree include:

- Software developer and engineer roles.
- IT consultant and analyst roles.
- Data scientist and analyst roles.
- Cybersecurity specialist roles.
- Network administrator and architect roles.
- Database administrator and architect roles.
- Web and mobile app developer roles.
- Cloud computing professional roles.
- IT project manager and leader roles.
- Academic and teaching roles.



P J COLLEGE OF MANAGEMENT & TECHNOLOGY

COURSE OUTCOME (MBA)

Subject : Managerial Economics

Subject Code : 18 MBA101

CO1	Understand the basic concepts of OB and its implementation in the organizational setting.
CO2	Analyze the individual differences at the workplace for better organizational performance
CO3	Identify and examine the characteristics of team for improved interpersonal relations.
CO4	Apply theories and frameworks to solve problems and take effective managerial decisions.
CO5	Evaluate and analyze how the study of individual and group behaviors can aid in improving managerial process and practices
CO6	Develop leadership competency in business related situations.

Subject : MARKETING MANAGEMENT

Subject Code : 18 MBA-102

CO1	Define various basic micro/macro economic variables in the context of management.
CO2	Explain various economic laws governing consumption, production and market.
CO3	Use demand estimation & forecasting analysis in practice as a proactive manager.
CO4	Differentiate price-output determination strategy under the different forms of market as well as under different circumstances.
CO5	Appraise the various business decision making strategy from the managerial point of view.
CO6	Design strategies for maximization/minimization of production, cost and profit as a prudent manager.

SUBJECT: ORGANISATIONAL BEHAVIOUR

SUBJECT CODE: 18MBA 103

CO1	Remember the basic concepts of Marketing.
CO2	Understanding the need and importance of Marketing in the competitive world.
CO3	Apply techniques and strategies of Marketing Management.
CO4	Analyze the impact of marketing environment on the marketing plan
CO5	Evaluate the factors influencing the consumer behavior for better application of marketing tools.
CO6	Creating a successful market plan using the varieties of marketing communication tool.

Subject : MANAGEMENT PRINCIPLES

Subject Code : 18MBA104

CO1	Define concepts of Management and the applications of different approaches of management.
CO2	Illustrate different forms of organizational structure.
CO3	Explain the components and process of decision making.
CO4	Classify the types of planning in learning organization
CO5	Compare the difference between risk and uncertainty in decision making process
CO6	Develop the conceptual understanding of controlling process and implementation of change management

Subject : DECISION SCIENCE

Subject Code : 18 MBA105

CO1	Recognizes the importance of statistics in various fields.
CO2	Elucidate basic statistics concepts and tests used in research
CO3	Apply LPP to find optimal Solution
CO4	Analyze Transportation and assignment problems in business application
CO5	Solve simple games using different techniques.
CO6	Design Markov chain and simulation techniques

Subject : BUSINESS COMMUNICATION

Subject Code : 18MBA106

CO1	Understand and Apply communication know-how to business contexts.
CO2	Learn and Apply listening, speaking, reading and writing (LSRW) skills of English language.
CO3	Apply creative and critical thinking to verbal communication in business contexts.
CO4	Learn to create business documents using appropriate language and format
CO5	Read, analyse and critique business texts for decision making
CO6	Making Effective Presentations in a business environment
CO7	Learn GD and interview skills for placements

Subject : FINANCIAL ACCOUNTING & ANALYSIS

Subject Code : 18MBA107

CO1	The students will be able to list and define various accounting terms, concepts and recall the formats of the books of accounts.
CO2	Classifies the transactions and phases of accounting process.

CO3	Prepare and demonstrate the financial statements
CO4	Interpretation of the financial performance and health of the organization.
CO5	Evaluate and judge the financial health of the organization by financial statement analysis.
CO6	Develop strategies for improving financial reporting efficiency.

Subject : BUSINESS LAW

Subject Code : 18MBA108

CO1	Acquire a sound understanding of the legal aspects of the laws affecting businesses
CO2	Apply basic legal knowledge to business transactions.
CO3	Communicate effectively using standard business and legal terminology
CO4	Analyze a given business context using basic understanding of the applicable Acts and develop a suitable operational framework.
CO5	Describe current law, rules, and regulations related to settling business disputes
CO6	Develop a statutory control framework for all the business transactions of a company

Subject : Business Environment and Ethics
Subject code: 18MBA109

CO1	Explain the concept of various constituents of environment and their impact on businesses functions and relate various concepts like business ethics, ethical dilemmas, corporate culture and ethical climate with business functions.
CO2	Understand the influences of different environmental factors and their impact on business decision also understand the importance and role of ethical behavior in the business world today
CO3	Demonstrate different conceptual framework of business environment and generate interest in National and International business.
CO4	Analyze and apply various methods and techniques (SWOT, PEST, ETOP& FORCASTING) in Business Environment in solving various business problems.
CO5	Examine and evaluate different business strategy in national and International Environment. And select best possible alternatives to solve business problems
CO6	Draw a Design of business plan after analysis of the market and environmental scenario.

Subject : CORPORATE FINANCE
Subject Code : 18 MBA201

CO1	Remembering the fundamental aspects of short and long term Investment and financial management.
CO2	Understanding the mechanism involved in maximizing profit and wealth , selecting profitable investment avenues and preparing suitable capital structure for the organization.

CO3	Applying mechanism in determining maximum possible return against minimum possible cost at a constant level of risk.
CO4	Analyzing alternative corporate finance mechanism for determining its applicability in different situation.
CO5	Evaluating and exploring the techniques of corporate finance for its application at the right time in right manner.
CO6	Creating a corporate finance model for generating and utilizing funds in an effective manner for the growth and Sustainance of the organization and other stakeholders.

Subject : INDIAN FINANCIAL SYSTEM AND SERVICES
Subject Code : 18MBA202

CO1	Understand the Indian financial system, current structure and regulation in reference to the macro economy.
CO2	Remember the guidelines of different regulators in the financial system.
CO3	Apply knowledge of banking ,Insurance and its recent developments
CO4	Evaluate operational practices of financial markets, institutions and services.
CO5	Illustrate the online trading mechanism in the Indian stock exchange
CO6	Create strategies to promote financial products and service

Subject :Human Resource Management
Subject Code : 18MBA203

CO1	Define the concept of human resources management and its different practices as it supports the success of the organization including the effective development of human capital as an agent for organizational change.
CO2	Explain the knowledge of performance appraisal and its component of employee performance, productivity and organizational effectiveness.
CO3	Demonstrate the role of employee benefits and compensation as a critical component of employee performance,productivity and organizational effectiveness.
CO4	To point out the types of wages and the practice of wage differentials in different industry
CO5	Compare between employee training and employee development as it impacts organizational strategy and competitive advantage.
CO6	Develop conceptual understanding of career planning, promotion, talent management and employee engagement

Subject : Business Research
Subject code:18 MBA 204

CO1	Identify the basic need of research and remember the terms required for various research activities.
CO2	Explain various techniques of research methodology
CO3	Utilize the knowledge of research methodology in solving various business problems.
CO4	Distinguish various alternative course of action available for a particular situation.
CO5	Judge and select best possible alternatives to solve business problems
CO6	Design and develop a good research based process in the organization.

Subject : Operations Management

Subject Code : 18MBA205

CO1	Define various basic operation management concepts, terminologies, strategies
CO2	Understand the meaning of productivity, cost and other factors of production
CO3	Making operations run smoothly involving the coordination of employees, resources, equipment, and information across organizational levels.
CO4	Analyze various, Production Planning and Control, Project Management, Business Analytics and other elements related to operations in both manufacturing and service industry.
CO5	Evaluate the micro and macro economical environment and select the best possible option for the organization
CO6	Create and develop a business operations system that will economically efficient.

Subject : INTERNATIONAL BUSINESS

Subject Code : 18 MBA-206

CO1	Understand the basic concepts and its implementation.
CO2	Analyze the differences at the workplace for better organizational performance
CO3	Identify and examine the characteristics of team for improved interpersonal relations.
CO4	Apply theories and frameworks to solve problems and take effective managerial decisions.
CO5	Evaluate and analyze how the study of individual and group behaviors can aid in improving managerial process and practices.
CO6	Develop Entrepreneurship competency in business related situations.

Subject : Fundamentals of IT &ERP

Subject Code : 18MBA207

CO1	Remembering the importance of IT in business, gathering knowledge about computer networking, internet security, DBMS, Data mining, BI, e-governance.
CO2	Understand the concept of ERP in different department, able to compare traditional vs. modern techniques of decision making process.
CO3	Apply different tools and application in functional areas of organization decision making system
CO4	Analyze and apply various ERP tools and application in each department
CO5	Examine and evaluate different business strategy in national and International Business strategy. And select best possible alternatives to solve business problems
CO6	Creating and implementing ERP tools for business plan after understanding the emerging trend of ERP application.

Subject : Corporate Strategy
Subject Code : 18MBA208

CO1	Recall the basic concept of strategy and its hierarchy.
CO2	Explain strategic intent and business environment of an organization.
CO3	Utilize the knowledge of competencies and competitive advantages while analyzing different industries.
CO4	Analyze different generic business strategies used by an organization.
CO5	Evaluate various strategic alternatives and business portfolio techniques.
CO6	Develop creative strategic solutions from real-life business situations.

Subject : Entrepreneurship Development
Subject Code : 18MBA209

CO1	Understand the basic concepts and its implementation.
CO2	Analyze the differences at the workplace for better organizational performance
CO3	Identify and examine the characteristics of team for improved interpersonal relations.
CO4	Apply theories and frameworks to solve problems and take effective managerial decisions.
CO5	Evaluate and analyze how the study of individual and group behaviors can aid in improving managerial process and practices.
CO6	Develop Entrepreneurship competency in business related situations.

Subject : CONSUMER BEHAVIOR
Subject Code : 18MBA301A

CO1	Remember the consumer behavior theories and marketing concepts.
CO2	Understand the different factors influencing consumer behavior.

CO3	Apply the different theories of consumer behavior in understanding consumer's mind.
CO4	Analyze the consumer decision making stages and deduce relevant strategies
CO5	Evaluate the cultural influences on organization and institutional consumer behavior.
CO6	Create plans and use different models of consumer behavior.

Subject : SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT
Subject Code : 18MBA301B

CO1	Recall different financial instruments, Regulations of the capital market, mechanism of securities markets.
CO2	Interpreting different practices of investment, understanding the risk return relationships and demonstrating different theories of investment and portfolio analysis.
CO3	Identifying different investment opportunities, applying different theories to construct portfolios and solve investment problems.
CO4	Examining the portfolio performances, Comparing mutual funds and investment companies.
CO5	Evaluate the investment opportunities using different tools and techniques.
CO6	Constructing efficient portfolios by combining different investment opportunities in to consideration.

Subject : MANPOWER PLANNING
Subject Code : 18MBA301C

CO1	Understand the basic concepts and its implementation.
CO2	Analyze the differences at the workplace for better organizational performance
CO3	Identify and examine the characteristics of team for improved interpersonal relations.
CO4	Apply theories and frameworks to solve problems and take effective managerial decisions.
CO5	Evaluate and analyze how the study of individual and group behaviors can aid in improving managerial process and practices.
CO6	Develop Entrepreneurship competency in business related situations.

Subject : SALES AND DISTRIBUTION MANAGEMENT
Subject Code : 18MBA302A

CO1	Recall the conceptual framework & challenges in the field of sales management.
CO2	Explain different elements of sales management and personal selling skills for effective salesmanship.
CO3	Demonstrate distribution functions for designing customer oriented marketing channel.

CO4	Explain channel behavior to manage conflicts among channel members.
CO5	Develop understanding about stock keeping units for a profitable inventory management.
CO6	Design a blueprint to develop an effective logistics and supply chain management system.

Subject : FINANCIAL DERIVATIVES

Subject Code : 18MBA302B

CO1	Recall different financial instruments, Define financial derivatives, the types of derivatives.
CO2	Demonstrate knowledge of all aspects of derivative market theory and the roles they play in the financial markets.
CO3	Identify how derivative instruments can be used to change or hedge risk and evaluate risks and pay-offs associated with trading such instruments and their implications.
CO4	Critically analyze and evaluate the techniques used to value options and the factors that determine valuation.
CO5	Enable the students to estimate and select right kind of derivatives amongst forward, futures, options, Greeks, swaps for risk hedging
CO6	Adopt the advanced techniques for pricing derivatives, Formulate investment models using derivative instruments.

Subject : EMPLOYEE RELATIONS

Subject Code : 18MBA302C

CO1	To Define Labour and employment Laws in India
CO2	To Explain different Mechanism of dispute settlement
CO3	To explain compensation and benefits available to the workmen under the legislations through the Payment of Wages act, Minimum wages Act
CO4	To point out various rights and benefits available to the workmen under the legislations through the E.S.I. Act, 1948, the employees provident fund Act, 1952 and Factories Act.
CO5	To compare the machinery contemplated under the provisions of the Industrial Disputes Act for the prevention and settlement of Industrial Disputes Act,
CO6	To develop conceptual understanding of Employee standing order and Industrial Dispute Act and its implications. in practice.

Subject : DIGITAL MARKETING
Subject Code : 18MBA303A

CO1	Recall the basic concept of digital marketing and its key drivers.
CO2	Explain digital consumer and community behavior.

CO3	Apply SEO techniques for effective online marketing.
CO4	Analyze email marketing and content strategies for effective CRM in digital marketing.
CO5	Evaluate various display ad placement techniques.
CO6	Develop and design mobile marketing for a product or service.

Subject : Advanced Management Accounting
Subject Code : 18MBA303B

CO1	Recall the concepts of cost, type of product, various methods and techniques of costing and cost management theory.
CO2	Demonstrate various classification of cost, cost center, the methods and techniques and methods of costing
CO3	Design the costing system to implement it in various organization to determine cost and have proper control
CO4	Can examine the existing system of costing in an organization and efficiency of operation.
CO5	Evaluate the cost efficiency of the various organizational functions.
CO6	Develop a process of efficient cost management system.

Subject : Compensation and Benefits Management
Subject Code : 18MBA303C

CO1	Remember the elements of compensation structure
CO2	Understanding philosophy of human resources and the concept of reward strategy with special reference of compensation remuneration
CO3	Applying various costing elements by conducting a remuneration survey
CO4	Analyze the CTC (cost to company) of each employee while considering the inflation factor
CO5	Evaluate various types of variables of pay and create a salary offer template
CO6	Develop & create various measures for dealing national and international compensation.

Subject : Service Marketing

Subject Code : 18MBA304A

CO1	Define and explain various terminologies, concepts and nature and scope of service marketing
CO2	Demonstrate a knowledge of the extended marketing mix for services;
CO3	Apply the service gap model and recognize the challenges faced in services delivery as outlined in the services gap model;
CO4	Analyze the need for innovations in services and robust demand-supply management for business sustainability.

CO5	Specify, analyse and select markets for specific service products
CO6	Develop strategies for improving service quality efficiently.

Subject : Project Appraisal and Financing

Subject Code : 18MBA304 B

CO1	Remembering and Understanding the definition ,nature, scope and importance of Project and Project Management.
CO2	Understanding the mechanism involved in appraising the project from commercial as well as from social point of view along with the cost and financing aspects.
CO3	Applying the key management mechanism in identifying , screening and selecting the right Project.
CO4	Analyzing the viabilities of Projects from different perspectives while deciding for its execution.
CO5	Evaluating different alternative models in selecting and managing the projects to cope with the changing business environment.
CO6	Creating a suitable project management model to apply it in varied circumstances and arriving at a better and up- to date project management structure.

Subject : Performance Management System
Subject Code : 18MBA304C

CO-1	Understand and Remember the concepts and stages of Performance Management system. Also understand traditional as well as modern appraisal method.
CO-2	Understand and appreciate the importance of implementing well-designed performance management systems and apply how performance management feeds into other core HR functions.
CO-3	Demonstrate different communication skills required when managing achievement and underachievement. And also Apply various reward system strategies like pay fair and justify remuneration on the basis of their efforts, skills and competencies.
CO-4	Analyse and apply various traditional and modern methods used to evaluate employee performance.
CO-5	Examine and evaluate employee's performance using different performance measures (EFQM, EVA, Balance score-card etc.)
CO-6	Create and develop feedback form for employees which help in reviewing their own performance in an organization. Also Design different HR practices for employees.

Subject : Retail Management
Subject Code : 18 MBA 401A

CO1	Remember the basic concept of retailing and different retail formats.
CO2	Explain retail consumer behavior in different types of buying decisions.
CO3	Utilize the knowledge of business districts while taking retail location decisions
CO4	Analyze merchandise planning mechanism and different retail layouts and designs.
CO5	Evaluate various tools of retail sales promotion.
CO6	Develop retail branding strategies.

Subject : Business Taxation
Subject code:18MBA 401B

CO1	Understand and Remember various forms of Tax like: Direct Tax, Indirect tax, VAT& GST with its constitutional framework and power & responsibilities conferred to different set-ups with their functional jurisdiction.
CO2	Understanding different source of income of Individual and Corporate assess and its computation for tax purpose.
CO3	Analyze and Apply the criteria laid down in the tax laws in determining the residential status of assess and their taxable income from various heads with applicable deductions and exemptions.
CO4	Analyzing and Applying the mechanism laid down in tax laws in determining different Indirect tax liabilities of Individual and corporate assess in its present form.
CO5	Evaluating the mechanism by using information technology within the framework of tax laws in deriving the taxable income of assess from their respective sources with applicable deductions and exemptions so as to depicts a true and actual figures of their tax liabilities.
CO6	Creating and deriving the tax planning & management formats in compliance with the prevailing tax laws to minimize the overall tax liabilities of assess.

Subject : Team Dynamics at Work
Subject Code : 18 MBA 401C

CO1	Understanding Teams, Defining Team Success,
CO2	Explain the knowledge of performance appraisal and its component of employee performance, productivity and organizational effectiveness.
CO3	Demonstrate the role of employee benefits and compensation as a critical component of employee performance, productivity and organizational effectiveness.
CO4	To point out the types of wages and the practice of wage differentials in different industry
CO5	Compare between employee training and employee development as it impacts organizational strategy and competitive advantage.
CO6	Develop conceptual understanding of career planning, promotion, talent management and employee engagement.

Subject : Product and Brand Management
Subject Code : 18 MBA 402 A

CO1	Identify the basic concepts of PBM and its implementation in the organizational setting.
CO2	Explain various fundamentals of Brand Management and compute brand value and equity.
CO3	Apply different concepts in Brand management like Brand Identity Prism, Brand Life Cycle etc.
CO4	Analyze the importance of brands and branding to a firm and its consumers.
CO5	Evaluate conceptual clarity among students regarding concepts of Product Management and Product Classification.
CO6	Develop New Product concept using the theoretical knowledge.

Subject : BEHAVIORAL FINANCE
Subject Code : 18MBA402B

CO1	Remember the Nature, Scope and significance Behavioral Finance and understand the investors sentiments and Bubble creation
CO2	Understanding the aspects of Expected Utility theory, Prospect theory, Allais paradox., Ellsberg's paradoxes and framing of mental accounting.
CO3	Apply different behavioral finance theory to map the risk attitude and the framing of mental accounting of investors.
CO4	Analyze different behavioral finance theory to determine the Market strategy, rationality in investment decision, portfolio movement.
CO5	Evaluate different behavioral finance theory to select the right market strategy, appropriate risk level and confidence level, suitable portfolio construction.
CO6	Create suitable structural model to determine the equation of risk attitude, framing of mental accounting and construction of portfolio through the application of behavioural finance theory.

Subject : Strategic HRM

Subject Code : 18 MBA 402 C

CO1	Remembering the concept of strategic human resource management and to understand its relevance in organizations.
CO2	Understand and discuss the value of key strategic human resource management concepts
CO3	Apply the factors determining pay rates & the different investment aspects in job security.
CO4	Analyse the strategic issues and strategies required to select and develop manpower resources.
CO5	Evaluate the strengths and weakness of SHRM practices across context.

CO6	Develop & create various measures for dealing Global HRM & International competitive advantage.
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Subject : B2B Marketing

Subject Code : 18 MBA403A

CO1	Define and explain various terminologies, concepts and nature and scope of B2B marketing
CO2	Understanding the business market & environment
CO3	Apply the concepts of B2B Marketing for Buying decision making process
CO4	Analyzing and Identifying the factors responsible for Selection of right segment in B2B Marketing.
CO5	Specify, analyze and select markets for specific products
CO6	Develop strategies for managing supply chain efficiently.

Subject : Mergers and Corporate Restructuring

Subject Code : 18 MBA403B

CO1	Explain the concept of corporate restructuring as a strategic decision and the relevance of different aspects of Financial Management in this regard.
CO2	Understanding different forms of strategic framework for Corporate restructuring purpose.
CO3	Applying the mechanism of strategic framework within the ambit of financial management in restructuring the organization and accomplishing sustainable development.
CO4	Analyzing different forms of strategic policy in an in-depth manner to make an alignment of strategic policy and financial management theory for achieving sustainable organizational goal.
CO5	Evaluating different forms of corporate restructuring and apply the right one at the right time in right ways as part of strategic policy decision for growth and Sustainability.
CO6	Create a suitable restructuring model in alignment with the financial management theory to achieve sustainable organizational objectives.

Subject : Industrial Legislations
Subject Code : 18MBA403 C

CO1	Demonstrate descriptive knowledge of the field of industrial legislations.
CO2	Understand the ways in which industrial legislations strategies are core parts of organisation and industry sustainability.
CO3	Apply the essential concepts of industrial legislations and their interrelationship at the personal, organization and national levels.
CO4	Analyse ways in which industrial legislations policies affect women, youth and migrant workers, the environment.
CO5	Investigate solutions to industrial legislations problems based on research and assessment of current practices.
CO6	strengthen key competencies in group participation, oral and written communication and persuasion, critical thinking, problem-solving, information processing and planning.

COURSE OUTCOME (MCA)

SUBJECT-DISCRETE MATHEMATICS
SUBJECT CODE- MCA01002

CO1	Understand the notion of mathematical thinking, mathematical proofs and to apply them in problem solving.
CO2	Ability to understand relations, Diagraph and lattice
CO3	Ability to reason logically
CO4	Ability to understand use of functions, graphs and their use in programming applications
CO5	Understand use of groups and codes in Encoding- Decoding
CO6	Apply discrete structures into other computing problems such as formal specification, verification, artificial intelligence, cryptography, Data Analysis and Data Mining etc

SUBJECT-COMPUTER SYSTEM ARCHITECTURE

SUBJECT CODE-MCA01002

CO1	Recall the basic structure and operational concepts of computer
CO2	Summarize the implementation of machine instructions and design of the arithmetic and logic unit.
CO3	Design various arithmetic combinational circuits for adder, fast adder, subtractor, multiplier, divisor etc.
CO4	Explain the main memory, cache memory and virtual memory management techniques
CO5	Distinguish different input - output mapping techniques
CO6	Contrast between array processing and vector processing.

SUBJECT- C AND DATA STRUCTURE

SUBJECT CODE- MCA01003

CO1	Write C codes on standard computing devices using conditional, branching and iterative constructs..
CO2	To understand modularization concept and write efficient and manageable code using functions
CO3	To model real life multi dimensional problems by using multi dimensional structures of C.
CO4	To manage various memory fragmentation problems by using dynamic memory concepts.
CO5	To implement I/O concepts and file handling concepts for managing the data and storing it in nonvolatile mediums
CO6	To implement I/O concepts and file handling concepts for managing the data and storing it in nonvolatile mediums.

SUBJECT-OPERATING SYSTEM

SUBJECT CODE -MCA01004

CO1	Understand the architecture and various functional modules of operating system such as: Process Management,
CO2	Implement their knowledge for Memory Management, I/O Management
CO3	Analyze and compare their knowledge for File Management.
CO4	Interpret the concept of Operating system in development of any software system, so as to build robust and scalable systems.
CO5	Understand the architecture and various functional modules of operating system such as: Process Management,

CO6	Apply knowledge of the functional modules of operating system in future scope management system.
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SUBJECT- DATABASE ENGINEERING
SUBJECT CODE -MCA01005

CO1	Understanding database concepts, terminology, and architectures.
CO2	Ability to design, implement, and manage databases for various applications.
CO3	Knowledge of data modeling techniques, normalization and database schema design.
CO4	Proficiency in database languages, such as SQL and query optimization techniques.
CO5	Understanding of data storage, retrieval and manipulation mechanism.

SUBJECT- DATA STRUCTURE USING LAB
SUBJECT CODE -MCA01006

CO1	Understanding fundamental data structures (arrays, linked lists, stacks, queues, trees, graphs).
CO2	Ability to implement and manipulate data structures using programming languages (e.g., C, C++, Java, Python).
CO3	Knowledge of algorithms for searching, sorting, inserting, and deleting data in various data structures.
CO4	Understanding of time and space complexity analysis for algorithms
CO5	Familiarity with dynamic memory allocation and object-oriented programming concepts.

SUBJECT- OPERATING SYSTEM LAB
SUBJECT CODE -MCA01007

CO1	Understanding of OS concepts: process management, memory management, file systems, I/O management, and security.
CO2	Hands-on experience with OS installation, configuration, and troubleshooting.
CO3	Ability to write programs using OS APIs and system calls.
CO4	Knowledge of process synchronization, inter-process communication, and concurrency.
CO5	Understanding of memory management techniques: paging, segmentation, and virtual memory.
CO6	Familiarity with file system implementation: file organization, directory structures, and disk management.

CO7	Ability to analyze and solve problems related to OS performance, reliability, and security.
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SUBJECT- DATABASE ENGINEERING LAB
SUBJECT CODE -MCA01008

CO1	Design and implementation of databases using various data models (relational, NoSQL, etc.).
CO2	Proficiency in database languages: SQL, query optimization, and indexing.
CO3	Understanding of database normalization, denormalization, and data warehousing.
CO4	Hands-on experience with database management systems (DBMS): installation, configuration, and troubleshooting
CO5	Ability to design and implement database security measures: access control, authentication, and backup/recovery
CO6	Knowledge of data modeling tools and techniques: entity-relationship diagrams, data flow diagrams, etc.

SUBJECT- COMPUTER NETWORK
SUBJECT CODE -MCA02001

CO1	Analyze and implement Network protocol simulation using NetSim, NS2.
CO2	Compare the throughput and normalized throughput for token ring and token bus for different transmitting nodes
CO3	Compare the CSMA/CD vs. CSMA/CA protocols for a fixed number of transmitting nodes.
CO4	Verify some protocols like STOP-and – WAIT, Go-Back-N and implement distance vector and link state routing algorithms
CO5	Apply socket programming techniques
CO6	Would have good understanding of mechanism of UDP, TCP congestion control and concept of Quality Of Service (QoS).

SUBJECT- ANALYSIS AND DESIGN OF ALGORITHM
SUBJECT CODE -MCA02002

CO1	Understanding of algorithmic complexity: time and space complexity, Big-O notation.
CO2	Ability to analyze and evaluate the efficiency of algorithms.

CO3	Knowledge of various algorithm design techniques: divide and conquer, dynamic programming, greedy algorithms, etc.
CO4	Understanding of sorting and searching algorithms: bubble sort, merge sort, quick sort, binary search, etc.
CO5	Familiarity with graph algorithms: traversal, shortest paths, minimum spanning trees, etc.
CO6	Ability to design and implement algorithms for various applications: data compression, encryption, etc.

SUBJECT- OBJECT ORIENTED PROGRAMMING USING JAVA
SUBJECT CODE -MCA02003

CO1	Understanding of OOP concepts: classes, objects, inheritance, polymorphism, encapsulation, and abstraction.
CO2	Ability to design and implement classes and objects using Java.
CO3	Knowledge of Java syntax and semantics: data types, operators, control structures, methods, etc.
CO4	Understanding of Java libraries and frameworks: collections, file I/O, networking, etc.
CO5	Ability to create reusable and modular code using OOP principles.

SUBJECT- OBJECT ORIENTED ANALYSIS AND DESIGN
SUBJECT CODE -MCA02004

CO1	Understanding of OOAD principles and methodologies: UML, Agile, etc.
CO2	Ability to analyze complex systems and identify objects, classes, and relationships.
CO3	Knowledge of object-oriented modeling techniques: use cases, class diagrams, sequence diagrams, etc.
CO4	Understanding of design patterns and principles: Singleton, Factory, Observer, etc.
CO5	Ability to create robust, scalable, and maintainable software designs.
CO6	Familiarity with object-oriented programming languages: Java, C++, Python, etc.
CO7	7. Understanding of software development life cycles: waterfall, iterative, incremental.

SUBJECT- INTERNET AND WEB PROGRAMMING
SUBJECT CODE -MCA02005

CO1	Understanding of internet technologies: TCP/IP, HTTP, FTP, etc.
CO2	Knowledge of web development languages: HTML, CSS, JavaScript, etc.

CO3	Ability to design and develop static and dynamic web pages
CO4	Understanding of web development frameworks: React, Angular, Vue, etc
CO5	Familiarity with database integration: MySQL, MongoDB, etc.

SUBJECT- JAVA AND PYTHON PROGRAMMING LAB
SUBJECT CODE -MCA02006

CO1	Understanding of Java syntax and semantics. Ability to write Java programs using variables, data types, operators, control structures, functions, and object-oriented programming concepts.
CO2	Ability to write Python programs using variables, data types, operators, control structures, functions, and object-oriented programming concepts.
CO3	Ability to analyze problems and design algorithms to solve them.
CO4	Understanding of programming principles: modularity, abstraction, encapsulation.
CO5	Ability to write efficient, readable, and well-documented code.
CO6	Understanding of version.

SUBJECT- COMPUTER LAB
SUBJECT CODE -MCA02007

CO1	Understanding of network fundamentals: OSI model, TCP/IP protocol suite, network topologies, etc.
CO2	Ability to design, implement, and troubleshoot computer networks.
CO3	Knowledge of network devices: routers, switches, firewalls, etc. Understanding of network protocols: HTTP, FTP, SSH, DNS, DHCP, etc
CO4	Ability to configure and manage network operating systems: Windows Server, Linux, etc.
CO5	Familiarity with network security measures: authentication, authorization, encryption, etc. Understanding of network performance optimization techniques.
CO6	Ability to use network simulation and modeling tools: Packet Tracer, NS2, etc. Knowledge of network architecture: LAN, WAN, Wi-Fi, VPN, etc. Understanding of emerging network technologies: SDN, NFV, IoT, etc.

SUBJECT- ALGORITHM DESIGN LAB
SUBJECT CODE -MCA02008

CO1	Ability to analyze computational problems and design efficient algorithms to solve them. Understanding of algorithmic complexity: time and space complexity, Big-O notation.
CO2	Knowledge of various algorithm design techniques: divide and conquer, dynamic programming, greedy algorithms, etc.
CO3	Ability to implement algorithms in a programming language: Python, Java, C++, etc . Understanding of data structures: arrays, linked lists, stacks, queues, trees, graphs, etc.
CO4	Ability to analyze and evaluate the efficiency of algorithms. Familiarity with algorithmic paradigms: recursion, iteration, brute force, etc.
CO5	Understanding of trade-offs between different algorithmic approaches. Ability to design and implement algorithms for real-world applications.
CO6	Development of problem-solving skills, critical thinking, and analytical skills.

SUBJECT- Software Engineering
SUBJECT CODE- MCA03001

CO1	Identify the requirement of software engineering in designing, development, testing and deployment of a real life software project.
CO2	Understand software life cycle model for systematic development of a project
CO3	Analyze the basic issues in software development process.
CO4	Model object oriented software design.
CO5	Recommend various coding standards and code review techniques.

SUBJECT- Compiler Design
SUBJECT CODE- MCA03002

CO1	Ability to design, develop, and implement a compiler for any language.
CO2	Able to use LEX and YACC tools for developing a scanner and a parser. Design and implement LL and LR parsers.
CO3	Design algorithms to perform code optimization in order to improve the performance of a program in terms of space and time complexity.
CO4	Ability to design algorithms to generate machine code. Understand syntax directed translation schemes.

SUBJECT- ELECTIVE 1(TO BE OPTED FROM NPTEL MOOC POOL)
SUBJECT CODE- MCA03003

CO1	Specialized knowledge in a specific domain or technology Ability to apply advanced concepts and techniques in the chosen elective.
CO2	Understanding of industry trends and applications in the elective domain . Development of skills in using tools, technologies, and software related to the elective
CO3	Ability to analyze and solve complex problems in the elective domain. Understanding of research and development in the elective field.
CO4	Familiarity with industry-specific standards, protocols, and best practices. Ability to design, develop, and implement solutions using the elective technology
CO5	Understanding of the social and ethical implications of the elective technology. Development of communication skills to explain complex technical concepts to non-technical audiences.

SUBJECT- ELECTIVE 2(TO BE OPTED FROM NPTEL MOOC POOL)
SUBJECT CODE- MCA03004

CO1	Advanced knowledge in a specialized domain or technology. Ability to apply cutting-edge concepts and techniques in the chosen elective.
CO2	Understanding of industry trends and applications in the elective domain. Development of skills in using advanced tools, technologies, and software related to the elective.
CO3	Ability to analyze and solve complex problems in the elective domain. Understanding of research and development in the elective field.
CO4	Familiarity with industry-specific standards, protocols, and best practices. Ability to design, develop, and implement innovative solutions using the elective technology.
CO5	Understanding of the social and ethical implications of the elective technology. Development of communication skills to explain complex technical concepts to non-technical audiences

SUBJECT- ELECTIVE 3(TO BE OPTED FROM NPTEL MOOC POOL)
SUBJECT CODE- MCA03005

CO1	Expert-level knowledge in a specialized domain or technology. Ability to apply advanced concepts and techniques to solve complex problems.
CO2	Understanding of industry trends, applications, and research in the elective domain. Development of skills in using specialized tools, technologies, and software.

CO3	Ability to design, develop, and implement innovative solutions& Understanding of industry-specific standards, protocols, and best practices.
CO4	Ability to communicate complex technical concepts to non-technical audiences.
CO5	Understanding of the social and ethical implications of the elective technology.
CO6	Development of skills in research

SUBJECT- Software Engineering Lab

SUBJECT CODE- MCA03006

CO1	Develop SRS document, design documents such as ER Diagrams, DFDs, UML Diagrams etc. for a given software project.
CO2	Develop efficient codes for a given software project using appropriate coding standards and guidelines and test the developed code using different tools
CO3	Implement different software project management techniques such as FP, COCOMO, CPM, PERT etc. .
CO4	Know the use of different computer aided software engineering (CASE) tools in the development, maintenance and reuse of software systems

SUBJECT- WEB PROGRAMMING LAB

SUBJECT CODE- MCA03008

CO1	Ability to design and develop dynamic web applications using client-side and server-side programming languages & Understanding of web development frameworks, libraries, and tools.
CO2	Knowledge of database management systems and integration with web applications &Ability to create responsive, mobile-friendly, and accessible web interfaces.
CO3	Understanding of web security, authentication, and authorization. Familiarity with version control systems and collaborative development.
CO4	Ability to troubleshoot and debug web applications. Understanding of web performance optimization techniques.
CO5	Knowledge of web services, APIs, and integration with third-party services & Development of problem-solving skills, critical thinking, and analytical skills in the context of web.

SUBJECT-COMPREHENSIVE VIVA -VOICE

SUBJECT CODE-MCA04001

CO1	Ability to demonstrate comprehensive knowledge and understanding of the subject matter & Effective communication and presentation skills.
CO2	Ability to think critically and respond to questions and challenges .Demonstration of problem-solving skills and analytical thinking.
CO3	Ability to defend and justify ideas, designs, and solution , Understanding of industry-specific standards, protocols, and best practices & Ability to work under pressure and manage time effectively.

SUBJECT-INTERNSHIP

SUBJECT CODE-MCA04002

CO1	Practical work experience in a specific industry or field & application of theoretical knowledge in a real-world setting.
CO2	Development of professional skills and etiquette. Understanding of industry-specific standards, protocols, and best practices.
CO3	Ability to work effectively in a team and collaborate with others. Development of problem-solving and critical thinking skills.
CO4	Ability to adapt to new situations and challenges. Understanding of the organization's culture and values
CO5	Development of networking skills and professional connections. Enhanced resume and job prospects.