



MAHARAJA INSTITUTE OF TECHNOLOGY MYSORE
BELAWADI, SRIRANGAPATNA TQ, MANDYA-571477



Department of Master of Computer Applications

MCA SUBJECT LIST AY: 2021-22

Subject name	Subject Name
ODD semester	
20MCA11	Data Structures with Algorithms
20MCA12	Operating System with Unix
20MCA13	Computer Networks
20MCA14	Mathematical Foundation for Computer Applications
20MCA15	Research Methodology and IPR
20MCA16	Data Structures with Algorithms Lab
20MCA17	Unix Programming Lab
20MCA18	Computer Networks Lab
20MCA19	Basics of Programming & CO
20MCA31	Data Analytics using Python (DAP)
20MCA32	IoT
20MCA33	Advances in Java (Ad.Java)
20MCA344	Software Testing (ST)
20MCA354	Software Project Management (SPM)
20MCA36	Data Analytics Lab with Mini-project
20MCA37	IoT Lab with Mini Project
20MCA38	Advances in Java Lab
18MCA51	Programming using C#.net (DOTNET)
18MCA52	Mobile Applications (MA)
18MCA53	Machine Learning (ML)
18MCA541	Multimedia Systems(MS)
18MCA551	System Simulation and Modelling (SSM)
18MCA56	C#.NET Lab
18MCA57	Mobile Applications Lab
18MCA58	Mini Project
EVEN SEMESTER	

20MCA21	Database Management System
20MCA22	Object Oriented Programming with Java
20MCA23	Web Technologies
20MCA24	Software Engineering
20MCA251	Cyber Security
20MCA263	Mobile Application Development
20MCA27	DBMS Lab
20MCA28	Java Programming Lab.
20MCA29	Web Technologies Lab with Mini-project
20MCA41	Advances in Web Technologies
20MCA42	Programming using C#
20MCA44	Project work
18MCA61	Internship
18MCA62	Project Work

Course Outcome

Subject: Data Structures and Algorithms

Subject Code: 20MCA11

CO's	DESCRIPTION OF THE OUTCOMES
20MCA11.1	Present the comprehension of Data Structure and Algorithm concepts like Stack, Queues, Lists, Trees, Searching and sorting to solve problems.
20MCA11.2	Apply the working nature of different types of data structures and their applications.
20MCA11.3	Analyze the given problem using various data structures and algorithm techniques.
20MCA11.4	Design the solutions for real world problems using data structure and algorithms.
20MCA11.5	Evaluate data structures and algorithms on real world applications

CO No	PO No									
	1	2	3	4	5	6	7	8	9	10
20MCA11.1	3							3		
20MCA11.2	3									
20MCA11.3		3	3							
20MCA11.4		3	3							
20MCA11.5			3							
CO Average	3	3	3					3		

Course Outcome

Subject: Operating Systems with UNIX

Subject Code: 20MCA12

CO's	DESCRIPTION OF THE OUTCOMES
20MCA12.1	Understand the Operating System concepts, Unix Architecture, Unix environment (Commands and its options), Process management, Shell Scripting, AWK scripting.
20MCA12.2	Apply the Unix commands and scripting language constructs for file processing.
20MCA12.3	Analyze the problem scenario and identify the commands and options required to solve the problem.

20MCA12.4	Evaluate the correctness of solution for a given problem written through shell scripts/AWK scripts.
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CO No	PO No									
	1	2	3	4	5	6	7	8	9	10
20MCA12.1							2			
20MCA12.2	3		2	3	2					2
20MCA12.3		3	2	3	3					
20MCA12.4		2	3		3					
CO Average	3	2.5	2.33	3	2.66		2			2



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Course Outcome

Subject: Computer Networks

Subject Code:

20MCA13

CO's	DESCRIPTION OF THE OUTCOMES
20MCA13.1	Present the comprehension of fundamentals of networking concepts such as layers, protocols, frame works / architecture, working principles of various layer protocols and associated concepts
20MCA13.2	Apply the appropriate algorithm for error control, flow control and reliable transmission of data over the network.
20MCA13.3	Analyze the performance of a network as affected through different network layers.

CO No	PO No									
	1	2	3	4	5	6	7	8	9	10
20MCA13.1							3	3		
20MCA13.2	3									
20MCA13.3		3								
CO Average	3	3					3	3		



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Course Outcome

Subject: Mathematical Foundation for Computer Application

Subject

Code:20MCA14

CO's	DESCRIPTION OF THE OUTCOMES
20MCA14.1	Understand and use logical notation and mathematical fundamental concepts using sets, relations & functions, permutation and mathematical induction.
20MCA14.2	Construct logic gates and use the rules of inference for logical implication.
20MCA14.3	Explain the probability through Baye's theorem, concept of discrete and continuous probability distribution with mean and variance.
20MCA14.4	Apply permutation combination and statistical methods for correlation, regression and also for curve fitting.

CO No	PO No									
	1	2	3	4	5	6	7	8	9	10
20MCA14.1	3	2					2			
20MCA14.2	3	2					2			
20MCA14.3	3	2					2			
20MCA14.4	3	2					2			
CO Average	3	2					2			



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Course Outcome

Subject: Research Methodology and IPR

Subject Code:

20MCA15

CO's	DESCRIPTION OF THE OUTCOMES
20MCA15.1	Identify the suitable research methods and articulate the research steps in a proper sequence.
20MCA15.2	Make use of literature survey, define the problem statement and suggest suitable solution for the given problem.
20MCA15.3	Analyze the problem and conduct experimental design with the samplings
20MCA15.4	Analyze concepts/section of Copy Right Act /Patent Act /Cyber Law/ Trademark to the given case

20MCA15.5	Formulate data from various sources and segregate the primary and secondary data
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CO No	PO No									
	1	2	3	4	5	6	7	8	9	10
20MCA15.1	2	-	-	-	-	-	-	-	-	-
20MCA15.2	-	2	-	-	-	-	-	-	-	-
20MCA15.3	-	3	-	-	-	-	-	-	-	-
20MCA15.4	-	2	-	-	-	-	-	-	-	-
20MCA15.5	-	-	-	2	-	-	-	-	-	-
CO Average	2	2.3	-	2	-	-	-	-	-	-



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Course Outcome

Subject: Data Structures and Algorithms Lab

Subject Code: 20MCA16

CO's	DESCRIPTION OF THE OUTCOMES
20MCA16.1	Apply Data Structure concepts like Stack, Queues, Lists, Trees, Searching and sorting to solve problems.
20MCA16.2	Apply the working nature of different types of data structures and their applications.
20MCA16.3	Analyze the given problem using various algorithm techniques.
20MCA16.4	Design the solutions for real world problems using data structure and algorithms.
20MCA16.5	Conduct experiments either individually or in a team and present its corresponding outcomes and process both orally and in a written form.

CO No	PO No									
	1	2	3	4	5	6	7	8	9	10
20MCA16.1	3							3		
20MCA16.2	3			3						
20MCA16.3		3	3	3						
20MCA16.4		3	3	3						
20MCA16.5				3						
CO Average	3	3	3	3				3		

Course Outcome

Subject: UNIX Programming Laboratory

Subject Code:

20MCA17

CO's	DESCRIPTION OF THE OUTCOMES
20MCA17.1	Apply the Unix commands and scripting language constructs for file processing.
20MCA17.2	Code, debug and demonstrate the working nature of Shell scripts and AWK scripts.
20MCA17.3	Analyze the problem scenario and identify the commands and options required to solve the problem.
20MCA17.4	Evaluate the correctness of solution for a given problem written through shell scripts/AWK scripts.

CO No	PO No									
	1	2	3	4	5	6	7	8	9	10
20MCA17.1							2			
20MCA17.2	3		2	3	2					2
20MCA17.3		3	2	3	3					
20MCA17.4		2	3		3					
CO Average	3	2.5	2.33	3	2.66		2			2

Course Outcome

Subject: Computer Networks Laboratory

Subject Code:

20MCA18

CO's	DESCRIPTION OF THE OUTCOMES
20MCA18.1	Apply suitable methodology for building familiar networks and associated algorithms with C/C++ and TCL scripting language.

20MCA18.2	Analyze given problem scenario, infer the correctness of the selected parameters based on efficacy of solution and document the same.
20MCA18.3	Design network topology with different protocols for better performance using NS2.
20MCA18.4	Conduct experiments either individually or in a team and present its corresponding outcomes and process both orally and in written form.

CO No	PO No									
	1	2	3	4	5	6	7	8	9	10
20MCA18.1	3									
20MCA18.2		3								
20MCA18.3			3							
20MCA18.4				3	3					
CO Average	3	3	3	3	3					



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Course Outcome

Subject: Data Analytics using Python (DAP)

Subject Code: 20MCA31

CO's	DESCRIPTION OF THE OUTCOMES
20MCA31.1	Present the comprehension of the fundamental concepts of python programming
20MCA31.2	Apply the Python programming for control statements, loops and functions to write programs for a wide variety problem in mathematics, science, and games.
20MCA31.3	Analyze the adoptability of OOPs concepts on python platform.
20MCA31.4	Design python programs using core data structures like Lists, Dictionaries; use Regular expressions and GUI based Applications

CO No	PO No									
	1	2	3	4	5	6	7	8	9	10
20MCA31.1							2	2		
20MCA31.2	3									
20MCA31.3		3								
120MCA31.4			3							
CO Average	3	3	3				2	2		

Course Outcome

Subject: Advanced Java Programming

Subject Code: 20MCA33

CO's	DESCRIPTION OF THE OUTCOMES
20MCA33.1	Comprehend the concept of Servlets , JSP, JDBC Architecture, Database interactions and EJBs.
20MCA33.2	Apply the usage of Servlets, JSP, Java beans, JDBC concepts in the development of Java Web and Enterprise Applications.
20MCA33.3	Analyze the usage of Servlets, JSP, Java beans and JDBC in Web application development.
20MCA33.4	Evaluate the suitability of Servlets, JSP, Java beans and JDBC concepts in the development of an efficient application.
20MCA33.5	Create the Java Database web application using Servlets, JSP, Java beans and JDBC concepts.

CO No	PO No									
	1	2	3	4	5	6	7	8	9	10
20MCA33.1										
20MCA33.2	3		3	3	2					2
20MCA33.3		3	2	3	3					2
20MCA33.4		3	3		3					
20MCA33.5			3		3					2
CO Average	3	3	2.75	3	2.75					2

CO's	DESCRIPTION OF THE OUTCOMES
20MCA344.1	Present the comprehend of basic concepts of software testing like decision tables, BVA, ECT, Structural testing, basis path, test coverage and associated concepts and present the same.
20MCA344.2	Apply BVA and ECT methods for functional testing.
20MCA344.3	Analyze the DD paths for structural testing and infer the results.
20MCA344.4	Evaluate the correctness of Basis Path and Test coverage
20MCA344.5	Design test cases for a given problem and document the same suitably.

CO No	PO No									
	1	2	3	4	5	6	7	8	9	10
20MCA344.1	2	-	-	-	-	-	-	-	-	-
20MCA344.2	-	3	-	-	-	-	-	-	-	-
20MCA344.3	-	2	-	-	-	-	-	-	-	-
20MCA344.4	-	-	-	2	-	-	-	-	-	-
20MCA344.5	-	-	3	-	-	-	-	-	-	-
CO Average	2	2.5	3	2	-	-	-	-	-	-



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Course Outcome

Subject: Software Project Management

Subject Code:

20MCA354

CO's	DESCRIPTION OF THE OUTCOMES
20MCA354.1	Understand the practices and methods of successful software project management
20MCA354.2	Apply the Cost-benefit Analysis for selecting the project
20MCA354.3	Apply PERT and CPM techniques for project Activity planning.
20MCA354.4	Analyze the scheduling of project activities using different graphical notations, and identify and categorize the Risks involved in the project.
20MCA354.5	Identify and categorize the Risks involved in the project and assess its impact and recommend the suitable solutions to manage the risks.

CO No	PO No									
	1	2	3	4	5	6	7	8	9	10
20MCA354.1						2				
20MCA354.2	3		3	3	2					2
20MCA354.3		3	2	3	3					
20MCA354.4		3	2		3					
20MCA354.5			3		2					2
CO Average	3	3	2.5	3	2.75	2				2



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Course Outcome

Subject: Advances in java Lab

Subject Code: 20MCA38

CO's	DESCRIPTION OF THE OUTCOMES
20MCA38.1	Apply the fundamental concepts of Servlets , JSP, JDBC Architecture, Database interactions and EJBs.
20MCA38.2	Code, debug and demonstrate the working nature of Servlets, JSP, Java beans, JDBC concepts in the development of Java Web and Enterprise Applications.
20MCA38.3	Identify the given problem and design the Java Web application using advanced Java concepts.
20MCA38.4	Evaluate the suitability of Servlets, JSP, Java beans and JDBC concepts in the development of an efficient application.
20MCA38.5	Create the Java Database web application using Servlets, JSP, Java beans and JDBC concepts.

CO No	PO No									
	1	2	3	4	5	6	7	8	9	10
20MCA38.1										
20MCA38.2	3		3	3	2					2
20MCA38.3		3	2	3	3					2
20MCA38.4		3	3	3	3					
20MCA38.5			3		3					2
CO Average	3	3	2.75	3	2.75					2

Course Outcome

Subject: PROGRAMMING USING C#&.NET

Subject Code: 18MCA51

CO's	DESCRIPTION OF THE OUTCOMES
18MCA51.1	Present the comprehension of the .Net Framework architecture and its components.
18MCA51.2	Apply OOPs concepts to develop console applications, using C# programming language.
18MCA51.3	Apply the knowledge of ADO.net, MySQL, ASP.NET for creating different applications.
18MCA51.4	Analyze the use of .Net Components depending on the problem statement.
18MCA51.5	Create web based and Windows based application with Database connectivity using ASP.NET, ADO.NET

CO No	PO No									
	1	2	3	4	5	6	7	8	9	10
18MCA51.1							3	3		
18MCA51.2	3									
18MCA51.3	3									
18MCA51.4		3								
18MCA51.5			3							
CO Average	3	3	3				3	3		

Course Outcome

Subject: Mobile Applications Development

Subject Code:

18MCA52

CO's	DESCRIPTION OF THE OUTCOMES
18MCA52.1	Present the comprehension of the fundamental concepts of mobile applications and all associated concepts within the purview of mobile applications.
18MCA52.2	Apply the principles of mobile applications to device programs suitable for known mobile operating systems such as Android, ios and Windows Phone.
18MCA52.3	Analyze the performance of the programs in terms of efficacy on different OS.

18MCA52.4	Design UI for mobile applications.
18MCA52.5	Create mobile applications for real world scenarios.

CO No	PO No									
	1	2	3	4	5	6	7	8	9	10
18MCA52.1	3							3		
18MCA52.2	3									
18MCA52.3		3	3							
18MCA52.4		3	3							
18MCA52.5			3							
CO Average	3	3	3					3		



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Course Outcome

Subject: NET LABORATORY

Subject Code:

18MCA56

CO's	DESCRIPTION OF THE OUTCOMES
18MCA56.1	Apply OOPs concepts using C# programming language to develop console applications.
18MCA56.2	Apply the knowledge of ADO.net, MySQL, ASP.NET for creating different applications.
18MCA56.3	Analyze the use of .Net Components depending on the problem statement.
18MCA56.4	Create a web based and Windows based application with Database connectivity using ASP.NET, ADO.NET
18MCA56.5	Conduct experiments either individuals or in a team and present its corresponding outcomes and process the both orally and in a written form.

CO No	PO No									
	1	2	3	4	5	6	7	8	9	10
18MCA56.1	3									
18MCA56.2	3									
18MCA56.3		3								
18MCA56.4			3							
18MCA56.5				3	3					
CO Average	3	3	3	3	3					

Course Outcome

Subject: Mobile Applications Lab

Subject Code:

18MCA57

CO's	DESCRIPTION OF THE OUTCOMES
18MCA57.1	Apply the fundamental concepts of mobile applications to solve problems.
18MCA57.2	Code, debug and demonstrate the working nature of mobile applications to device programs suitable for known mobile operating systems such as Android, ios and Windows Phone.
18MCA57.3	Identify the given problem and design the mobile application using various mobile application concepts.
18MCA57.4	Design solutions to solve real world problems using mobile applications.
18MCA57.5	Create mobile applications to solve the real world problems, infer the efficacy of the solution and document them suitably.

CO No	PO No									
	1	2	3	4	5	6	7	8	9	10
18MCA57.1	3							3		
18MCA57.2	3			3						
18MCA57.3		3	3	3						
18MCA57.4		3	3	3						
18MCA57.5				3						
CO Average	3	3	3	3				3		

Course Outcome

Subject: Machine Learning

Subject Code:

18MCA53

CO's	DESCRIPTION OF THE OUTCOMES
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CO Average	2.5	2.5								
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Course Outcome

Subject: System Simulation and Modeling

Subject Code:

18MCA551

CO's	DESCRIPTION OF THE OUTCOMES
18MCA551.1	Understand the basic knowledge of discrete event simulation models.
18MCA551.2	Apply functional modeling methods for statistical system activities to conceptualize real world situation.
18MCA551.3	Analyze different types of random numbers and random variate generation techniques for solving problem through statistical functions, the performance of different system simulation model by verification, validation, and optimization techniques.

CO No	PO No									
	1	2	3	4	5	6	7	8	9	10
18MCA551.1	-	-	-	-	-	-	3	3	-	-
18MCA551.2	3	-	-	-	-	-	-	-	-	-
18MCA551.3	-	3	-	-	-	-	-	-	-	-
CO Average	3	3	-	-	-	-	3	3	-	-



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Course Outcome

Subject: Mini Project

Subject Code:

18MCA58

CO's	DESCRIPTION OF THE OUTCOMES
18MCA58.1	Apply the technical knowledge gained from previous courses with the awareness of impact of technology on the society and their ethical responsibilities to identify suitable problem.
18MCA58.2	Analyze the use of appropriate tools to form team, segregate work and execute/implement project
18MCA58.3	Evaluate the findings of complex problems through critical thinking and decision making capabilities to propose project based solutions
18MCA58.4	Develop skills to disseminate technical and general information by means of oral as well as written presentation skills with professionalism.

CO No	PO No									
	1	2	3	4	5	6	7	8	9	10
18MCA58.1	3		2	3	1	2				
18MCA58.2		3			3					3
18MCA58.3				3						
18MCA58.4						2		3		3
CO Average	3	3	2	3	2	2		3		3



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Course Outcome

Subject: Database Management Systems

Subject Code: 20MCA21

CO's	DESCRIPTION OF THE OUTCOMES
20MCA21.1	Understand the ER-Model, Schema Design, Writing of Queries ,Views ,Procedures, Triggers and Transaction management concepts in DBMS.
20MCA21.2	Apply the Database concepts in designing and writing queries for the problem .
20MCA21.3	Analyze the given problem scenario using DBMS concepts.
20MCA21.4	Evaluate the suitability of ER-model, Database schema design, optimality of Queries, Views, Procedures and Triggers for efficient data transactions.
20MCA21.5	Create ER-model, Database, queries on relations, views, procedures and triggers for a

given real world problem.

CO No	PO No									
	1	2	3	4	5	6	7	8	9	10
20MCA21.1										
20MCA21.2	3		3	3	2					2
20MCA21.3		3	2	3	3					
20MCA21.4		3	3	2	3					
20MCA21.5			3		3					2
CO Average	3	3	2.75	2.66	2.75					2



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Course Outcome

Subject: Object Oriented Programming with Java

Subject Code: 20MCA22

CO's	DESCRIPTION OF THE OUTCOMES
20MCA22.1	Understand the Core OOP concepts in Java, Usage of Packages, interfaces, exception handling, multithreading and Java Networking.
20MCA22.2	Apply the JAVA Object oriented concepts in writing java programs
20MCA22.3	Analyze the given problem statement using Core java concepts.
20MCA22.4	Develop the Java Application for a given scenario.

CO No	PO No									
	1	2	3	4	5	6	7	8	9	10
20MCA22.1	2									
20MCA22.2	3									
20MCA22.3		3								
20MCA22.4			3		3					
CO Average	2.5	3	3		3					



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Department of MCA

Course Outcome

CO's	DESCRIPTION OF THE OUTCOMES
20MCA23.1	Present the comprehension of the basic knowledge of HTML,CSS, client side technologies such as javascript, JQuery, Bootstrap and angularJS .
20MCA23.2	Apply HTML5 syntax and semantics to compose forms and tables using CSS.
20MCA23.3	Apply Object Oriented concepts in JavaScript to build dynamic web pages.
20MCA23.4	Analyze the correctness of the scripts, code and protocols that ensures a qualitative web page.
20MCA23.5	Design a dynamic web portal by using HTML5 and client side scripting language for real world scenarios.

CO No	PO No									
	1	2	3	4	5	6	7	8	9	10
20MCA23.1							3	3		
20MCA23.2	3									
20MCA23.3	3									
20MCA23.4		3								
20MCA23.5			3							
CO Average	3	3	3				3	3		



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Course Outcome

Subject: Software Engineering

Subject Code: 20MCA24

CO's	DESCRIPTION OF THE OUTCOMES
20MCA24.1	Comprehend the software engineering terminologies, ethics and practices.
20MCA24.2	Identify the different system models and architectural designs for software.
20MCA24.3	Apply process activities as different process models.
20MCA24.4	Analyze software engineering practice over the entire system life cycle.
20MCA24.5	Adopt project management skills including planning, scheduling, object-oriented design and risk assessment.

CO No	PO No									
	1	2	3	4	5	6	7	8	9	10

20MCA24.1	3					3				
20MCA24.2		3	2							
20MCA24.3			2							
20MCA24.4										
20MCA24.5										3
CO Average	3	3	2			3				3



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Course Outcome

Subject: CYBER SECURITY

Subject Code: 20MCA251

CO's	DESCRIPTION OF THE OUTCOMES
20MCA251.1	Present the comprehension of the basic concepts of cyber security and their importance in the cyber world.
20MCA251.2	Apply the appropriate techniques to solve cyber security threats
20MCA251.3	Analyze various vulnerabilities and security flaws in the operating systems, web servers, network equipment and incorporate the same in cyber law.

CO No	PO No									
	1	2	3	4	5	6	7	8	9	10
20MCA251.1	-	-	-	-	-	-	-	3	-	-
20MCA251.2	3	-	-	-	-	-	-	-	-	-
20MCA251.3	-	3	-	-	-	-	-	-	-	-
CO Average	3	3	-	-	-	-	-	3	-	-

Course Outcome

Subject: Database Management Systems Lab

Subject Code:

20MCA27

CO's	DESCRIPTION OF THE OUTCOMES
20MCA27.1	Understand the ER-Model, Schema Design, Writing of Queries ,Views ,Procedures, Triggers and Transaction management concepts in DBMS.
20MCA27.2	Apply the Database concepts in designing and writing queries for the problem .
20MCA27.3	Analyze the given problem scenario using DBMS concepts.
20MCA27.4	Evaluate the suitability of ER-model, Database schema design, optimality of Queries, Views, Procedures and Triggers for efficient data transactions.
20MCA27.5	Create ER-model, Database, queries on relations, views, procedures and triggers for a given real world problem.

CO No	PO No									
	1	2	3	4	5	6	7	8	9	10
20MCA27.1										
20MCA27.2	3		3	3	2					2
20MCA27.3		3	2	3	3					
20MCA27.4		3	3	2	3					
20MCA27.5			3		3					2
CO Average	3	3	2.75	2.66	2.75					2

Course Outcome

Subject: Java Programming Lab

Subject Code: 20MCA28

CO's	DESCRIPTION OF THE OUTCOMES
20MCA28.1	Apply the Core OOP concepts in Java and Java Networking in writing Java Programs.
20MCA28.2	Analyze the given problem statement using Core java concepts.

20MCA28.3	Evaluate the suitability of classes, interfaces in the development of java console based application.
20MCA28.4	Design the learning's into real world problems solutions.
20MCA28.5	Conduct experiments either individually or in a team and present its corresponding outcomes and process both orally and in written form

CO No	PO No									
	1	2	3	4	5	6	7	8	9	10
20MCA28.1	3									
20MCA28.2		3								
20MCA28.3		3	3		3					
20MCA28.4			3							
20MCA28.5				3	3					
CO Average	3	3	3	3	3					

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Course Outcome

Subject: Web Technologies

Subject Code:

20MCA29

CO's	DESCRIPTION OF THE OUTCOMES
20MCA29.1	Apply HTML5 syntax and semantics to compose forms and tables using CSS.
20MCA29.2	Apply Object Oriented concepts in JavaScript to build dynamic web pages.
20MCA29.3	Analyze the correctness of the scripts, code and protocols that ensures a qualitative web page.
20MCA29.4	Design a dynamic web portal by using HTML5 and client side scripting language for real world scenarios.
20MCA29.5	Conduct experiments either individuals or in a team and present its corresponding outcomes and process the both orally and in a written form.

CO No	PO No									
	1	2	3	4	5	6	7	8	9	10
20MCA29.1	3									
20MCA29.2	3									
20MCA29.3		3								
20MCA29.4			3							
20MCA29.5				3	3					
CO Average	3	3	3	3	3					

Subject: Advanced Web Programming

Subject Code: 20MCA41

CO's	DESCRIPTION OF THE OUTCOMES
20MCA41.1	Present the comprehension of the basic knowledge of Client side and server side scripting languages such as Bootstrap, Ruby on Rails, PHP and AJAX.
20MCA41.2	Apply the Bootstrap and semantics to compose simple programs.
20MCA41.3	Apply PHP and Ruby syntax and semantics to design dynamic web portals.
20MCA41.4	Analyze the correctness of the scripts, code and protocols that ensures a qualitative web page.
20MCA41.5	Design a dynamic web portal by using client side and server side scripting language for real world scenarios.

CO No	PO No									
	1	2	3	4	5	6	7	8	9	10
20MCA41.1							3	3		
20MCA41.2	3									
20MCA41.3	3									
20MCA41.4		3								
20MCA41.5			3							
CO Average	3	3	3				3	3		

Subject: PROGRAMMING USING C#&.NET

Subject Code: 20MCA42

CO's	DESCRIPTION OF THE OUTCOMES
20MCA42.1	Present the comprehension of the .Net Framework architecture and its components.
20MCA42.2	Apply OOPs concepts to develop console applications, using C# programming language.
20MCA42.3	Apply the knowledge of ADO.net, MySQL, ASP.NET for creating different applications.
20MCA42.4	Analyze the use of .Net Components depending on the problem statement.
20MCA42.5	Create web based and Windows based application with Database connectivity using ASP.NET, ADO.NET

CO No	PO No									
	1	2	3	4	5	6	7	8	9	10
20MCA42.1							3	3		
20MCA42.2	3									
20MCA42.3	3									
20MCA42.4		3								
20MCA42.5			3							
CO Average	3	3	3				3	3		



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Course Outcome

Subject: Internship

Subject Code: 18MCA61

CO's	DESCRIPTION OF THE OUTCOMES
18MCA61.1	Comprehend the key concerns, practices, standard operating procedures protocols & new concepts of the particular company/industry in which they have worked.
18MCA61.2	Apply hands on experience, communication, interpersonal & other critical skills to integrate theory & practice in multidisciplinary area.
18MCA61.3	Manage time, analyze the skills which are transferable to new contexts & identify which appropriate technology could be used to solve given problem.

CO No	PO No									
	1	2	3	4	5	6	7	8	9	10
18MCA61.1		2		2						
18MCA61.2					3			3	2	3
18MCA61.3		3							2	3
CO Average		2.5		2	3			3	2	3



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Course Outcome

Subject: Project Work

Subject Code: 18MCA62

CO's	DESCRIPTION OF THE OUTCOMES
18MCA62.1	Apply the technical and knowledge gained from previous courses with the awareness of impact of technology on the society and their responsibilities to identify suitable problem.
18MCA62.2	Analyze the use of appropriate tools, segregate work and execute / implement project.
18MCA62.3	Evaluate the findings of complex problems through critical thinking and decision making capabilities to propose project based solutions.
18MCA62.4	Develop skills to disseminate technical and general information by means of oral as well as written presentation skills with professionalism.

CO No	PO No									
	1	2	3	4	5	6	7	8	9	10
18MCA62.1	3									
18MCA62.2		3	3		3					3
18MCA62.3				2						
18MCA62.4								3		
CO Average	3	3	3	2	3			3		3