

Course Outcomes

MCA

**Course Outcomes
2015 Scheme Onwards**

MCA 3rd Sem

MCA 301	Database Administration	<ol style="list-style-type: none">1. Learn install and configure various database packages. The like tables, views and indexes.2. Learn various database tasks like data migration, Importing and Exporting data.3. Learn to create user accounts, grant privileges and implement database encryption.4. Learn Database backup and recovery.5. To learn various database objects perform database tuning and optimization.
MCA302	Information Security	<ol style="list-style-type: none">1. Identify common network security vulnerabilities and attacks.2. To explain the foundations of Cryptography and network security.3. Impart knowledge on Encryption techniques, Design Principles and Modes of operation.4. Be familiar with Firewall Design Principles and network security designs using available secure solutions.5. Identify user authentication, access control and database security.
MCA303	Software Engineering & Project Management	<ol style="list-style-type: none">1. Understand the process to be followed in SDLC.2. Apply advanced design principles.3. Understand the concept of Project planning and development methodologies.4. Create test strategies and plans, design test cases, prioritize and execute them5. The relationship between testing, software quality and other verification techniques.
MCA304	Java Programming	<ol style="list-style-type: none">1. Understand the concept of OOPs as well as the purpose and usage principles of Inheritance, polymorphism, encapsulation etc.2. To understand and Make use of array, constructors, Inheritance, Packages and Interfaces.3. Understand the concept of Internet Programming Using Java Applets & Graphic Programming4. Learn the advanced concepts of java and implement socket programming and servlet programming .5. Understand the concept of Exceptional Handling/Event Handling & Java I/O Handling.
MCA305A	System Programming	<ol style="list-style-type: none">1. To understand and compare single pass and two pass assembler. Show the use of SYMTAB and OPTAB.2. To understand and compare various types of editors, linkers and loaders.3. To identify the compiler phases. Construct

		<p>small/part of compiler.</p> <ol style="list-style-type: none"> 4. Able to understand basic concepts of Operating System and file Management. 5. To understand the concept of Macro Processors.
MCA306	Software Lab-VI(Database Administration)	<ol style="list-style-type: none"> 1. Design and model relational databases. 2. Document database structures and rules. 3. Maintain and retrieve data. 4. Perform Database Integrity with the help of column and table level constraints 5. Develop databases with Database Packages such as MySQL on a variety of operating system platforms like Windows 7 and Web Server like Apache.
MCA307	S/W Lab-VII [JAVA Programming]	<ol style="list-style-type: none"> 1. Install JDK and Its Editor 2. Method to write, save, compile and execute Java Programs. 3. Implement the concepts of classes, loops, conditions. 4. Implement the concepts of constructors, Inheritance. 5. Implement the concepts of Packages and Interfaces and to implement the concepts of Internet Programming using Applets.

MCA 4th Sem		
MCA401	Mobile Application Development	<ol style="list-style-type: none"> 1. Familiarize with Mobile apps development aspects. 2. Design and develop Mobile Software Engineering. 3. Design and develop mobile apps, using Android as development platform, with key focus on user experience design, native data handling and background tasks and notifications. 4. Introduction to iOS application development. 5. Appreciation of nuances such as native hardware play, location awareness, graphics, and multimedia.
MCA402	E- Commerce & Web Application	<ol style="list-style-type: none"> 1. Describe the concept of Ecommerce& WWW 2. To define the security issues on the web, the available solutions & future aspects of Ecommerce. 3. To describe the concept of e-payment & EDI. 4. To describe various HTML tags & types of CSS. 5. To define the basic concepts of PHP, java script, & MYSQL database access.

MCA403	Interactive Computer Graphics	<ol style="list-style-type: none"> 1. Understand the foundations of Computer graphics. 2. Understand the concept of Geometric mathematical and algorithmic concepts necessary for programming computer graphics. 3. Understand the comprehension of window clipping and view port object representation in relation to images displayed on screen 4. Understand the concepts of geometric and composite transformations on objects. 5. Understand the concepts of shading, surface Elimination on the objects.
MCA404	Advanced Operating Systems	<ol style="list-style-type: none"> 1. Identify and define key terms related to operating systems. 2. Explain basic concepts related to Multiprocessor and Distributed Operating system 3. Recall the function of Principal Mosix OS 4. Describe the general architecture of computers. 5. Gain some practical experience with systems programming and tools.
MCA405	SOFTWARELAB-VIII (Web & Mobile Application Development)	<ol style="list-style-type: none"> 1. Installing Java, Eclipse, and Android: Android Studio and Genymotion 2. Developing2Android based applications 3. Designing webpage usingCSS3 4. Program using if control statement in JavaScript 5. Webpage accepting input from user and handling database connectivity.
MCA406	Software Lab-IX(Interactive Computer Graphics)	<ol style="list-style-type: none"> 1. Understand the basic concepts of computer graphics 2. Understand practical fundamentals of line drawing, circle drawing, curve drawing. 3. Understand practical concepts of region fill algorithms. 4. Understand the concept of different type of geometric transformation of objects in 2D and 3D. 5. Understand practical implementation of computer graphics output primitives, modeling, rendering and viewing of objects.

MCA 5th Sem

MCA501	Artificial Intelligence	<ol style="list-style-type: none"> 1. Describe the key components of the artificial intelligence field and its relation and role in Computer Science. 2. Define the concepts of BFS and DFS.
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		<ol style="list-style-type: none"> 3. Describe the basics of Reasoning and Knowledge representation. 4. Use the concepts of Planning and Uncertainty. 5. Communicate clearly and effectively using the technical language of the field correctly.
MCA502	Design and analysis of algorithms	<ol style="list-style-type: none"> 1. Become familiar with fundamental data structures. 2. Ability to estimate programming time using Asymptotic notations 3. Use the concept of Dynamic programming, Backtracking, Branch and Bound, Greedy algorithm to solve computing problems. 4. Interpretation of the basics of the NP-completeness and analyze NP-complete by using polynomial time reductions. 5. Able to handle operations like Sorting and Searching.
MCA503	Web Technologies	<ol style="list-style-type: none"> 1. Describe the XML basics, Editors, Schemas and Document Object Model. 2. Familiar with the AJAX, jQuery and working with events 3. Description of Web Services its Uses & Types. 4. Describe the concept of SOAP and JSON. 5. Describe the concept of Content management System, Study of Word Press & Creation of Websites.
MCA504	Object Oriented Analysis & Design with UML	<ol style="list-style-type: none"> 1. Understanding of basics object-oriented design methodology. 2. Design of problem using object model involving class diagrams, object diagrams. 3. Understanding the concepts of generalization and associations 4. Design of problem using dynamic model. 5. Understanding basics of state transition diagrams.
MCA505	Software Lab–XI(Web Technologies)	<ol style="list-style-type: none"> 1. Analyze a web page and identify its elements and attributes. 2. Create web pages using XHTML and Cascading Styles sheets. 3. Build web applications using PHP. 4. Create XML Schema. 5. Build and consume web services.
MCA506	Software Lab–XII (Object Oriented Analysis and	<ol style="list-style-type: none"> 1. Understanding the basic object-oriented design methodology using UML. 2. Implementation and design of problem using

	Design with UML)	<p>object model involving class diagrams, object diagrams using UML</p> <ol style="list-style-type: none"> 3. Implementation of the concepts of generalization and associations using UML. 4. Implementation and design of problem using dynamic model involving state transition diagrams using UML. 5. Implementation and design of problem using functional model involving data flow diagrams.
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MCA 6th Sem		
MCA601	Data Warehousing & Mining	<ol style="list-style-type: none"> 1. Grasp basic knowledge about the Data warehouse, architecture and relationships. 2. In-depth knowledge of temporal data warehouse. 3. Describe about data mining, its issues, processing models. 4. Classification of various measures, presentation and visualization of patterns. 5. Apply the various association rules, association mining classification and clustering.
MCA602	Cloud Computing	<ol style="list-style-type: none"> 1. Understand various basic concepts related to cloud computing technologies 2. Understand the architecture and concept of different cloud models: IaaS, PaaS, SaaS 3. Understand the underlying principle of cloud virtualization, cloud storage, data management and data visualization. 4. Be familiar with application development and deployment using cloud platforms. 5. Learn to develop scalable applications using platforms like AWS, IBM and Microsoft Azure.
MCA603	Advanced Computer Architecture	<ol style="list-style-type: none"> 1. Describe the principles of computer design, instruction set architectures, multi-core processors & Hazards. 2. Understand the Fundamentals of Memories 3. Describe the operation of performance enhancements such as pipelines, dynamic scheduling, branch prediction, caches, and vector processors. 4. Describe modern architectures such as RISC, Super Scalar, VLIW 5. Understand the several advanced optimizations to achieve cache performance.
MCA604	Software Testing &	<ol style="list-style-type: none"> 1. Analyze different approaches to software testing

	Quality Management	<p>and quality assurance, and select optimal solutions for different situations and projects</p> <ol style="list-style-type: none"> 2. Conduct independent research in software testing. 3. Understand basics of quality assurance standards. 4. Apply relevant standards and perform testing, and quality management and practice 5. Evaluate the work of peers constructively by following proven methods of peer-review, and by using the principles of research ethics.
MCA605	Software Lab– XIII(Software Testing)	<ol style="list-style-type: none"> 1. To study fundamental concepts in software testing, including software testing objectives, process, criteria, strategies, and methods. 2. To discuss various software testing issues and solutions in software unit test; integration, regression, and system testing 3. To understand software test automation problems and solutions. 4. To learn how to write software testing documents, and communicate with engineers in various forms. 5. To gain the techniques and skills on how to use modern software testing tools to support software testing projects.