

**J.J. College of Arts & Science (Autonomous), Pudukkottai**

**Department of Computer Application**

**Course Outcomes**

**B.C.A – USCA**

<b>Course Name - Programming in C</b>		<b>Course Code - U1R1CACC1</b>
<b>Upon Completion of the course students would be able to</b>		
<b>CO 1</b>	Gain knowledge in the structure of C language	
<b>CO 2</b>	Write programs using C Programming language	
<b>CO 3</b>	Have the expertise in using the various data types in C effectively	
<b>CO 4</b>	Gain Knowledge in handling files	
<b>CO 5</b>	Have a career in the field of information technology as developer	
<b>Course Name - Programming in C -Practical</b>		<b>Course Code - U1R1CACC2P</b>
<b>Upon Completion of the course students would be able to</b>		
<b>CO 1</b>	Know how to write a basic structure of C Programs	
<b>CO 2</b>	Learn to know about basic scientific calculation programs	
<b>CO 3</b>	Know about how to work with textual information, characters and strings	
<b>CO 4</b>	Gain knowledge of work with array, structure and pointers concepts	
<b>CO 5</b>	Handle possible errors during program execution	
<b>Course Name - Algebra and Calculus</b>		<b>Course Code - U1R1MCAC1</b>
<b>Upon Completion of the course students would be able to</b>		

<b>CO 1</b>	Access students in making the transition from the arithmetic to the symbolic form
<b>CO 2</b>	obtain the knowledge of Characteristic equation, Eigen Values and Eigen Vectors
<b>CO 3</b>	Obtain expressions for higher order derivatives of a function using the rules of differentiation
<b>CO 4</b>	Compute the expression for the differential equations of first order
<b>CO 5</b>	Interpret the indefinite integral as a definite integral with variable limits
<b>Course Name – Object Oriented Programming Language Using C++ and Java</b>	
<b>Course Code – U2R1CACCC3</b>	
<b>Upon Completion of the course students would be able to</b>	
<b>CO 1</b>	Learn the Overview of C++ and Java
<b>CO 2</b>	Gain the Knowledge about inheritances in C++ Classes
<b>CO 3</b>	Obtain the Knowledge about Interfaces and Packages
<b>CO 4</b>	Gain the Concept of Multithreading and Exceptions
<b>CO 5</b>	Acquire the Concept and use of Applet Programming
<b>Course Name – Object Oriented Programming Language Using C++ and Java - Practical</b>	
<b>Course Code – U2R1CACCC4P</b>	
<b>Upon Completion of the course students would be able to</b>	
<b>CO 1</b>	Understanding a functional hierarchical code organization.
<b>CO 2</b>	Get knowledge to work with arrays of complex objects.
<b>CO 3</b>	Understanding a concept of object thinking within the framework of functional model.
<b>CO 4</b>	Gain the knowledge of how to develop web programs using Java
<b>CO 5</b>	Know about Multithreading execution from programs.

<b>Course Name - Operations Research</b>		<b>Course Code – U2R1MORAC2</b>
<b>Upon Completion of the course students would be able to</b>		
<b>CO 1</b>	<b>Identify and develop OR models from the verbal description of the real system</b>	
<b>CO 2</b>	<b>Develop the solving technique and analyze the concepts of feasibility</b>	
<b>CO 3</b>	<b>Solve specialized linear programming problems like the transportation and assignment problems</b>	
<b>CO 4</b>	<b>Identify the resources required for a project and generate a plan and work schedule</b>	
<b>CO 5</b>	<b>Develop computational skill and logical thinking in formulating industry oriented problems as a mathematical problem and finding solutions to these problems</b>	
<b>Course Name - Numerical Methods And Statistics</b>		<b>Course Code – U2R1MNMAC3</b>
<b>Upon Completion of the course students would be able to</b>		
<b>CO 1</b>	<b>Acquire the knowledge of transcendental and polynomial equations</b>	
<b>CO 2</b>	<b>Choose the suitable computational method among existing methods</b>	
<b>CO 3</b>	<b>Understand the nature and operations of Numerical analysis with theories &amp; concepts</b>	
<b>CO 4</b>	<b>Know about numerical methods to solve Numerical differentiation and Integration</b>	
<b>CO 5</b>	<b>Compute Correlation coefficients and Regression Analysis</b>	
<b>Course Name – Database Management System</b>		<b>Course Code – U3R1CACC5</b>
<b>Upon Completion of the course students would be able to</b>		
<b>CO 1</b>	<b>Gain the knowledge on Database System and its purpose</b>	
<b>CO 2</b>	<b>Understand the need for Normalization</b>	
<b>CO 3</b>	<b>Write Queries using various SQL commands</b>	
<b>CO 4</b>	<b>Map E-R model to Relational Model to Perform Database Design Effectively</b>	
<b>CO 5</b>	<b>Code the PL\SQL Block</b>	
<b>Course Name – Relational Database Management System – Practical</b>		<b>Course Code – U3R1CACC6P</b>
<b>Upon Completion of the course students would be able to</b>		
<b>CO 1</b>	<b>Gain a knowledge about the back end application programs</b>	
<b>CO 2</b>	<b>Gain knowledge to write SQL commands to create, insert, delete, update data in tables</b>	
<b>CO 3</b>	<b>Understand to specify primary and foreign key constraints in CREATE TABLE statements</b>	
<b>CO 4</b>	<b>Write SQL aggregation queries involving GROUP BY and HAVING clauses</b>	
<b>CO 5</b>	<b>Understand to write triggers, indexes and how to use them in programs</b>	

<b>Course Name - Organisational Behaviour</b>		<b>Course Code – U3R1CAAC4</b>
<b>Upon Completion of the course students would be able to</b>		
<b>CO 1</b>	<b>Equipped the students with the basic idea and introduction on Organizational Behavior as a concept.</b>	
<b>CO 2</b>	<b>Gives a light on the concept and difference of personality and perception.</b>	
<b>CO 3</b>	<b>Gain the knowledge on Attitude, value and learning.</b>	
<b>CO 4</b>	<b>Understand the concept of group dynamics.</b>	
<b>CO 5</b>	<b>Impacted Knowledge with work stress and job satisfaction.</b>	
<b>Course Name - Python Programming</b>		<b>Course Code – U4R1CACCC7</b>
<b>Upon Completion of the course students would be able to</b>		
<b>CO 1</b>	<b>Apply a solution clearly and accurately in a program using Python</b>	
<b>CO 2</b>	<b>Apply the best features of mathematics, engineering and natural sciences to program real life problems</b>	
<b>CO 3</b>	<b>Design the real life situational problems and think creatively about solutions to them</b>	
<b>CO 4</b>	<b>Gain the knowledge about Dictionaries and Tuples</b>	
<b>CO 5</b>	<b>Understand the concept of Files</b>	
<b>Course Name - Python Programming Practical</b>		<b>Course Code – U4R1CACCC8P</b>
<b>Upon Completion of the course students would be able to</b>		
<b>CO 1</b>	<b>Write, test and debug python programs</b>	
<b>CO 2</b>	<b>Implement conditionals and loops for python programs</b>	
<b>CO 3</b>	<b>Gain knowledge to use functions and represent compound data using Lists, Tuples and Dictionaries</b>	
<b>CO 4</b>	<b>Read and write data from and to files in python</b>	

<b>CO 5</b>	<b>Understand to develop application using programs</b>
<b>Course Name - Accounting Packages - Practical</b>	
<b>Course Code – U4R1CACC5P</b>	
<b>Upon Completion of the course students would be able to</b>	
<b>CO 1</b>	
<b>CO 2</b>	
<b>CO 3</b>	
<b>CO 4</b>	
<b>CO 5</b>	
<b>Course Name – Financial and Management Accounting</b>	
<b>Course Code – U4R1CAAC6</b>	
<b>Upon Completion of the course students would be able to</b>	
<b>CO 1</b>	<b>Understand about the concept of management accounting, and different methods of analysis of financial statements.</b>
<b>CO 2</b>	<b>Elicit knowledge on various types of ratio analysis techniques and analyzing the cost volume and break even analysis in Marginal costing.</b>
<b>CO 3</b>	<b>Proficiency in preparation of different types of budgets like sales budget, Cash budget and flexible budget etc.</b>
<b>CO 4</b>	
<b>CO 5</b>	
<b>Course Name - Operating System</b>	
<b>Course Code – U5R1CACC9</b>	
<b>Upon Completion of the course students would be able to</b>	
<b>CO 1</b>	<b>Describe the importance of computer system resources and the role of OS</b>
<b>CO 2</b>	<b>Understand the process management policies and scheduling process by CPU</b>
<b>CO 3</b>	<b>Evaluate the requirement for process synchronization and coordination by OS</b>
<b>CO 4</b>	<b>Analyze the memory management concepts and its allocation policies</b>
<b>CO 5</b>	<b>Identify and evaluate the different storage management policies</b>

<b>Course Name - Programming in asp .Net</b>		<b>Course Code – U5R1CACCC10</b>
<b>Upon Completion of the course students would be able to</b>		
<b>CO 1</b>	<b>Get a clear picture about the .NET Framework</b>	
<b>CO 2</b>	<b>Gain the insight of the Assemblies, Namespaces and Web Application</b>	
<b>CO 3</b>	<b>Accumulate the knowledge about Web Controls</b>	
<b>CO 4</b>	<b>Get a fair idea about the statement and Rich, validation controls</b>	
<b>CO 5</b>	<b>Know the establishment of ADO .NET</b>	
<b>Course Name - Programming in Asp.Net - Practical</b>		<b>Course Code – U5R1CACCC11P</b>
<b>Upon Completion of the course students would be able to</b>		
<b>CO 1</b>	<b>Work with .net framework and its ASP.NET Controls</b>	
<b>CO 2</b>	<b>Know about page layout, master pages, Tree view and Ad rotator controls</b>	
<b>CO 3</b>	<b>Gain knowledge to develop dynamic web based applications</b>	
<b>CO 4</b>	<b>Know about validation controls and its execution</b>	
<b>CO 5</b>	<b>Handle to know database connectivity using Data Controls</b>	
<b>Course Name - Software Engineering</b>		<b>Course Code – U6R1CACCC12</b>
<b>Upon Completion of the course students would be able to</b>		
<b>CO 1</b>	<b>Understand about Software Engineering</b>	
<b>CO 2</b>	<b>Estimate the cost using various techniques</b>	
<b>CO 3</b>	<b>Model the software projects using design notations</b>	
<b>CO 4</b>	<b>Implement the coding with various techniques and strategies</b>	
<b>CO 5</b>	<b>Analyze, design, verify, validate, implement and maintain software systems</b>	

<b>Course Name - Programming in Php</b>		<b>Course Code - U6R1CACCC13</b>
<b>Upon Completion of the course students would be able to</b>		
<b>CO 1</b>	Know about the working of WAMP and to publish their website	
<b>CO 2</b>	Apply the Object-oriented design principles in PHP	
<b>CO 3</b>	Connect to database to fetch, store and update persistent information	
<b>CO 4</b>	Store business logic in the database using stored procedures	
<b>CO 5</b>	Test and debug Object-oriented PHP scripts	
<b>Course Name - Programming in Php – Practical</b>		<b>Course Code – U6R1CACCC14P</b>
<b>Upon Completion of the course students would be able to</b>		
<b>CO 1</b>	Write PHP scripts to handle HTML forms	
<b>CO 2</b>	Get knowledge to create programs with various PHP library functions	
<b>CO 3</b>	Handle and manipulate files and directories	
<b>CO 4</b>	Analyze and solve various database tasks using the PHP programs	
<b>CO 5</b>	Implement dynamic web pages that interact with MySQL Database	
<b>Course Name - Data Communication Networks</b>		<b>Course Code - M.B.E - 1</b>
<b>Upon Completion of the course students would be able to</b>		
<b>CO 1</b>	Describe the components of data communication system	
<b>CO 2</b>	Describe the type of signals and features in physical layers and media	
<b>CO 3</b>	Describe the various error detection and correction schemes in Data link layer	
<b>CO 4</b>	Explain the role of networks in network layer	
<b>CO 5</b>	Describe the security and standards of protocol suite	
<b>Course Name - Fundamentals of Data Structures</b>		<b>Course Code - M.B.E – 2</b>

<b>Upon Completion of the course students would be able to</b>	
<b>CO 1</b>	<b>Choose appropriate data structure for specific problem</b>
<b>CO 2</b>	<b>Handle storage management techniques</b>
<b>CO 3</b>	<b>Learn the various domains like DBMS, Compiler</b>
<b>CO 4</b>	<b>Use linear and non-linear data structures legibly</b>
<b>CO 5</b>	<b>Have knowledge of network and topological sorting</b>
<b>Course Name - Computer Architecture and Organization</b>	
<b>Course Code - M.B.E – 3</b>	
<b>Upon Completion of the course students would be able to</b>	
<b>CO 1</b>	<b>Use various metrics to calculate the performance of a computer system</b>
<b>CO 2</b>	<b>Identify the addressing mode of instructions</b>
<b>CO 3</b>	<b>Determine which hardware blocks and control lines are used for specific instructions</b>
<b>CO 4</b>	<b>Demonstrate how to add and multiply integers and floating point numbers</b>
<b>CO 5</b>	<b>Map a virtual address into a physical address</b>
<b>Course Name - E-Commerce</b>	
<b>Course Code - M.B.E - 4</b>	
<b>Upon Completion of the course students would be able to</b>	
<b>CO 1</b>	<b>Demonstrate an understanding the foundation and importance of E-Commerce</b>
<b>CO 2</b>	<b>Describe the tools for E-Commerce</b>
<b>CO 3</b>	<b>Describe the key features of Intranet, Extranet and Internet</b>
<b>CO 4</b>	<b>Elucidate the impact of Electronic Data Interchange in E-Commerce</b>
<b>CO 5</b>	<b>Assess Electronic Payment System and its security features</b>
<b>Course Name - Internet of Things</b>	
<b>Course Code - M.B.E. - 5</b>	
<b>Upon Completion of the course students would be able to</b>	
<b>CO 1</b>	<b>Apply the concepts of IoT to different applications</b>
<b>CO 2</b>	<b>Use domain specific IoT to evaluate the data received through sensors</b>



<b>CO 3</b>	<b>Design and Develop the IoT system management</b>
<b>CO 4</b>	<b>Apply several logical designs of IoT using Python</b>
<b>CO 5</b>	<b>Design and implement successful recommendation engines for enterprises</b>
<b>Course Name - Software Application Practical</b>	
<b>Course Code - M.B.E - 6</b>	
<b>Upon Completion of the course students would be able to</b>	
<b>CO 1</b>	<b>Acquire a job in IT or ITES</b>
<b>CO 2</b>	<b>Interact with the clients and process their requests</b>
<b>CO 3</b>	<b>Obtain knowledge about development of windows and web based applications</b>
<b>CO 4</b>	<b>Learn how to apply the programming logic and techniques</b>
<b>CO 5</b>	<b>Gain an overall knowledge in the process of software development</b>
<b>Course Name - Internet And World Wide Web</b>	
<b>Course Code - S.B.E – 1</b>	
<b>Upon Completion of the course students would be able to</b>	
<b>CO 1</b>	<b>Access the internet easily for better usage</b>
<b>CO 2</b>	<b>Learn how to handle the tags for developing the web page</b>
<b>CO 3</b>	<b>Develop a web page with scripts and functions</b>
<b>CO 4</b>	<b>Work on 2-tier or 3-tier architecture platform</b>
<b>CO 5</b>	<b>Gain knowledge in web services</b>
<b>Course Name - Web Designing Using Html</b>	
<b>Course Code - S.B.E - 2</b>	
<b>Upon Completion of the course students would be able to</b>	
<b>CO 1</b>	<b>Handle Script and Functions</b>
<b>CO 2</b>	<b>Develop a web page with scripts</b>
<b>CO 3</b>	<b>Modify the existing web content</b>
<b>CO 4</b>	<b>Apply the skill in real world to acquire a job</b>
<b>CO 5</b>	<b>Understand about the form elements in HTML</b>

<b>Course Name - Multimedia and Its Applications</b>		<b>Course Code - S.B.E - 3</b>
<b>Upon Completion of the course students would be able to</b>		
<b>CO 1</b>	<b>Understand the basics of Multimedia</b>	
<b>CO 2</b>	<b>Acquire the knowledge about multimedia software and hardware</b>	
<b>CO 3</b>	<b>Learn about Audio and Video File Format</b>	
<b>CO 4</b>	<b>Develop the skills in multimedia and internet</b>	
<b>CO 5</b>	<b>Gain the knowledge about delivering a multimedia project</b>	
<b>Course Name - Web Services</b>		<b>Course Code - S.B.E - 4</b>
<b>Upon Completion of the course students would be able to</b>		
<b>CO 1</b>	<b>Understand the basics in XML</b>	
<b>CO 2</b>	<b>Develop the concept of XML technology family</b>	
<b>CO 3</b>	<b>Gain the knowledge about SOAP</b>	
<b>CO 4</b>	<b>Get knowledge about web services</b>	
<b>CO 5</b>	<b>Obtain the concept of XML Security</b>	
<b>Course Name - Computer Graphics</b>		<b>Course Code - S.B.E – 5</b>
<b>Upon Completion of the course students would be able to</b>		
<b>CO 1</b>	<b>The basic understanding of the core concepts of computer graphics</b>	
<b>CO 2</b>	<b>Get knowledge about the geometric transformation on graphics</b>	
<b>CO 3</b>	<b>Gain the knowledge in the problem solving aspects of the field</b>	
<b>CO 4</b>	<b>Extract scene with different clipping methods and its transformation to graphics display device</b>	
<b>CO 5</b>	<b>Obtain the skills required to develop animations</b>	
<b>Course Name - Computer Networks</b>		<b>Course Code - S.B.E – 6</b>
<b>Upon Completion of the course students would be able to</b>		

<b>CO 1</b>	<b>Build their own network and maintain it without any struggle</b>
<b>CO 2</b>	<b>Understand the OSI reference model</b>
<b>CO 3</b>	<b>Learn about the various techniques and modes of transmission</b>
<b>CO 4</b>	<b>Understand the TCP/IP configuration for windows</b>
<b>CO 5</b>	<b>Understand the network security and various protocols such as FTP, HTTP and DNS</b>
<b>Course Name - Computer Skill Development Course</b>	
<b>Course Code - I.D.C - 1</b>	
<b>Upon Completion of the course students would be able to</b>	
<b>CO 1</b>	<b>Understand the knowledge about computers and its types</b>
<b>CO 2</b>	<b>Attain the skills about Input, Output and Memory Units</b>
<b>CO 3</b>	<b>Acquire the competence of computers and its applications</b>
<b>CO 4</b>	<b>Gain the knowledge about various types of programming language</b>
<b>CO 5</b>	<b>Obtain the insight about role of computers in human life</b>
<b>Course Name - Internet Skill Development Course</b>	
<b>Course Code - I.D.C – 2</b>	
<b>Upon Completion of the course students would be able to</b>	
<b>CO 1</b>	<b>Gain the knowledge about Internet and its Applications</b>
<b>CO 2</b>	<b>Acquire the skills of Servers, Browsers and Security</b>
<b>CO 3</b>	<b>Get the insight about HTML and XML</b>
<b>CO 4</b>	<b>Learn about Searching and webcasting techniques</b>
<b>CO 5</b>	<b>Gain the knowledge about network and security programming</b>
<b>Course Name - Fundamentals of Photoshop</b>	
<b>Course Code - I.D.C - 3</b>	
<b>Upon Completion of the course students would be able to</b>	
<b>CO 1</b>	<b>Understand the basics of principles of Photoshop palette</b>
<b>CO 2</b>	<b>Learn the layers and masks</b>

<b>CO 3</b>	<b>Get the knowledge about filters</b>
<b>CO 4</b>	<b>Understand the text, effects, and type tools</b>
<b>CO 5</b>	<b>Obtain the knowledge about special effects</b>
<b>Course Name - Computer Applications in Chemistry</b>	<b>Course Code - I.D.C – 4</b>
<b>Upon Completion of the course students would be able to</b>	
<b>CO 1</b>	<b>Obtain knowledge about computer</b>
<b>CO 2</b>	<b>Understand the need for operating system</b>
<b>CO 3</b>	<b>Understand the fundamentals of computer networks</b>
<b>CO 4</b>	<b>Understand the basics of the programming language C</b>
<b>CO 5</b>	<b>Know the applications of Programming language C in Chemistry</b>