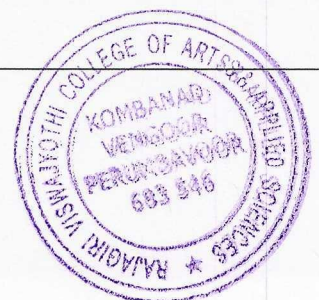


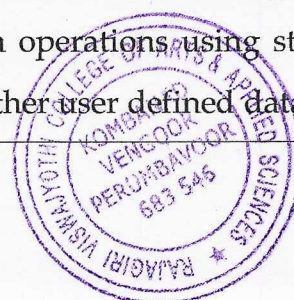
6	BA60CT28	Advertisement and Salesmanship	CO1	To orient students in Marketing Management.
			CO2	To encourage entrepreneurial skills.
			CO3	To meet the demand of the various industrial sectors
6	BA6PRP31	Management Project	CO1	Outline the existing scenarios in various functional areas of Management of different companies.
			CO2	Analyze the existing framework through various evaluation techniques.
			CO3	Demonstrate skills to present ideas related to the topics selected.

#### BACHELOR OF COMPUTER APPLICATIONS

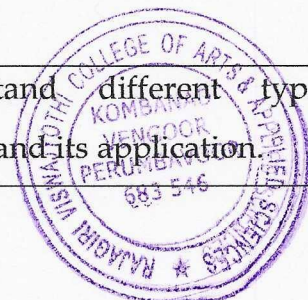
SEMESTER	COURSE CODE	COURSE TITLE	CO	COURSE OUTCOME
1	EN1CC01	English Common Course I - Fine- Tune your English	CO1	Understand the key methodologies used in literary analysis and their historical development.
			CO2	Apply various literary theories to interpret and critique different texts.
			CO3	Analyse the impact of cultural, social, and historical contexts on literary works.
			CO4	Understand the influence of different critical perspectives on the interpretation of literary texts.



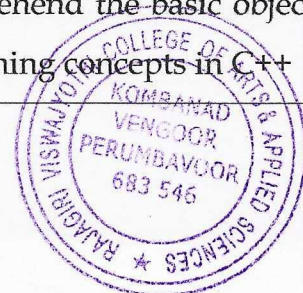
			CO5	Apply research skills to conduct independent literary studies and present findings effectively.
1	CA1CRT01	Computer Fundamental and Digital Principles	CO1	Bridge the fundamental concepts of computers with the present level of knowledge of the students
			CO2	Familiarize operating systems, programming languages, peripheral devices, networking, multimedia and internet
			CO3	Understand binary, hexadecimal and octal number systems and their arithmetic.
			CO4	Understand how logic circuits and Boolean algebra forms as the basics of digital computer.
			CO5	Demonstrate the building up of Sequential and combinational logic from basic gates
1	CA1CRT02	Methodology of Programming and Language C	CO1	Students would be able to read, understand and trace the execution of programs written in C Language.
			CO2	Students would be able to write C programs for a given algorithm.
			CO3	Students would be able to implement programs with control structures, functions, arrays and pointers.
			CO4	Students would be able to write programs that perform operations using structure, union and other user defined datatypes.



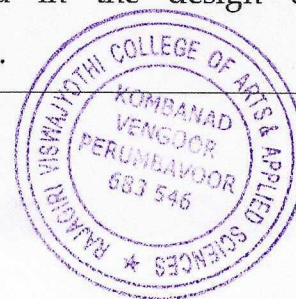
1	CA1CRP01	Software Lab I	CO1	Develop the logic to solve the given problem.
			CO2	Write programs using control structures in C.
			CO3	Write programs based on arrays and strings
			CO4	Write programs using user-defined functions, structures and pointers
1		Discrete Mathematics 1	CO1	Understand and apply propositional logic, including propositional equivalence, predicates, quantifiers, and rules of inference
			CO2	Define and manipulate sets, perform set operations, and analyze functions, sequences, and summations.
			CO3	Explore the properties of integers, division, prime numbers, greatest common divisors, and their applications in number theory and cryptosystems.
			CO4	Analyze relations, their properties, representation methods, equivalence relations, and partial orderings
1		Basic Statistics & Introductory Probability Theory	CO1	To develop the student's ability to deal with numerical and quantitative issues in computer science
			CO2	To enable the use of statistical, graphical and algebraic techniques whenever relevant
			CO3	To understand different types of distribution and its application.



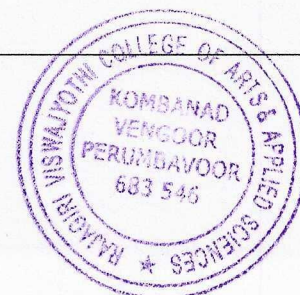
			CO4	Able to demonstrate their understanding of descriptive statistics by practical application of quantitative reasoning and data visualization
		<b>English Common Course II- Issues that Matter</b>	CO1	Help the learners to evaluate the contemporary issues of concern
			CO2	Examine the major issues of contemporary significance
			CO3	Create awareness in learners to respond rationally and positively to the issues raised in Society
			CO4	Internalise the values imparted through the selections in the works provided.
2	CA1812103	<b>Data Base Management Systems Core</b>	CO1	Practice with the SQL queries
			CO2	Understand ER model
			CO3	Understand how to design database
			CO4	Understand transaction processing
2	CA2CRT04	<b>Computer Organization and Architecture</b>	CO1	Describe the fundamental organisation of a computer system
			CO2	Explain the functional units of a processor
			CO3	Explain addressing modes, instruction formats and program control statements
			CO4	Distinguish the organization of various parts of a system memory hierarchy
			CO5	Describe basic concept of parallel computing
			CO6	Describe fundamentals concepts of pipeline and vector
2	CA2CRT05	<b>Object Oriented</b>	CO1	To comprehend the basic object-oriented programming concepts in C++



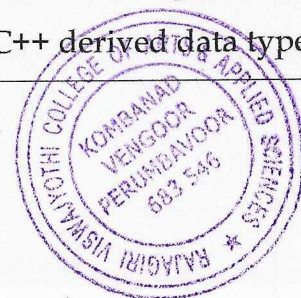
		<b>Programming using C++</b>	<b>CO2</b>	Describe the constructors, destructors and operator overloading concepts in C++
			<b>CO3</b>	Understand the concept of code reusability with the help of Inheritance.
			<b>CO4</b>	Students should able to apply pointers, virtual functions and files in complex programming situations.
<b>2</b>	<b>CA2CRP02</b>	<b>Software Lab II</b>	<b>CO1</b>	Students should able to formulate query, using SQL, solutions to a broad range of query and data update problems.
			<b>CO2</b>	Students should able to transform an information model into a relational database schema and to use a data definition language and/or utilities to implement the schema using a DBMS.
			<b>CO3</b>	Students should be able to develop solutions for a range of problems using objects and classes.
			<b>CO4</b>	Students should able to understand how to apply the major object-oriented concepts to implement object oriented programs in C++, encapsulation, inheritance and polymorphism
<b>2</b>		<b>Discrete Mathematics II</b>	<b>CO1</b>	Explore application of trees in computer science.
			<b>CO2</b>	Learns about networks.
			<b>CO3</b>	Explore the application of Boolean Algebra in the design of electronic circuits.



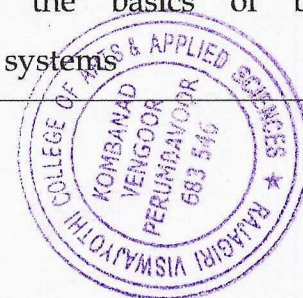
			CO4	Able to set up and solve the augmented matrix associated with a linear system in three variables.
			CO5	To improve problem solving skills.
3	CA3CRT06	Computer Graphics	CO1	Understand hardware and software components of graphics systems and application areas of computer graphics.
			CO2	Apply fundamental algorithms to generate lines and circles
			CO3	Implement 2D geometric transformations and viewing algorithms.
			CO4	Understand various 3D display methods and object Representation techniques.
			CO5	Acquire the basic concepts of computer animations, Understand hardware and software components of graphics systems and application areas of computer graphics. Apply fundamental algorithms to generate lines and circles. Implement 2D geometric transformations and viewing algorithms.
3	CA1813109	Data Structure using C++	CO1	Implement sorting and searching algorithms using Arrays
			CO2	Apply various data structure stacks, queues using arrays
			CO3	Implement linked list using dynamic memory allocation
			CO4	Show tree traverse technique to various applications



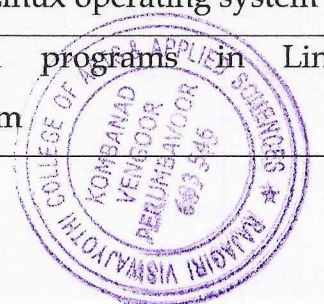
3	CA3CRT08	Operating Systems	CO1	Acquire the basic understanding of Operating system.
			CO2	Understand the concepts of process and various process Scheduling Algorithms.
			CO3	Appraise the design of various algorithms for process Synchronization and deadlock handling.
			CO4	Analyze various memory management techniques.
			CO5	Master concepts related to file system interface, implementation and disk management.
3	CA3CRT07	Microprocessor and PC Hardware	CO1	Understand the functionality and features of CPU.
			CO2	Understand the architecture of 8085 microprocessor.
			CO3	Understand the instruction set and addressing modes of 8085 microprocessor.
			CO4	Identify the components of a motherboard.
			CO5	Acquire the basic understanding of memory modules and the logical memory layout
3	CA1813603	Software Lab III	CO1	Discuss the provisions in C++ to organize and manipulate data structures using array
			CO2	Understand stack and queue executions in terms of C++ derived data type.



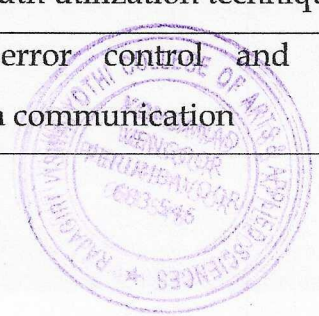
			<b>CO3</b>	Apply the concepts of dynamic memory allocation for the formation of linked list and for garbage collection
			<b>CO4</b>	Apply tree terminology for data manipulations
		<b>Advanced Statistical Methods</b>	<b>CO1</b>	To understand the concept of the sampling distribution of a statistical and the behaviour of sample mean.
			<b>CO2</b>	Apply inferential methods relating to the means of normal distribution.
			<b>CO3</b>	Able to demonstrate their knowledge of the basics of inferential statistics by making valid generalization from sample data.
			<b>CO4</b>	Able to demonstrate their knowledge of the basics of inferential statistics by making valid generalization from sample data.
4	CA4CRT10	<b>Design and Analysis of Algorithms</b>	<b>CO1</b>	Students should able to define the basic concepts of algorithms and analyze the performance of algorithms.
			<b>CO2</b>	Students should able to use various algorithm design techniques or developing algorithms.
			<b>CO3</b>	Students should able to estimate time complexity of various searching and sorting algorithms
4	CA4CRT11	<b>System analysis &amp;</b>	<b>CO1</b>	Understand the basics of business information systems



		<b>Software Engineering</b>	<b>CO2</b>	Understand the basics of software engineering and life cycle models
			<b>CO3</b>	Identify software requirements engineering and project planning activities
			<b>CO4</b>	Understand the software design framework and software reliability
			<b>CO5</b>	Assimilate the knowledge of different software testing strategies.
<b>4</b>	<b>CA4CRT13</b>	<b>Web Programming using PHP</b>	<b>CO1</b>	Students should able to understand the general concepts of PHP scripting language for the development of Internet websites
			<b>CO2</b>	Students should able to understand the basic functions of MySQL database program.
			<b>CO3</b>	Students should able to learn the relationship between the client side and the server side scripts
			<b>CO4</b>	Students should able to develop a final project using the learned techniques
<b>4</b>	<b>CA4CRT12</b>	<b>Linux Administration</b>	<b>CO1</b>	Students should able to understand the basic set of commands and utilities in Linux systems.
			<b>CO2</b>	Understand the fundamental concepts of open-source operating system Linux
			<b>CO3</b>	Understand the basic set of commands and editors in Linux operating system
			<b>CO4</b>	Develop shell programs in Linux operating system



			CO5	Understand the role and responsibilities of a Linux system administrator.
4	CA1CRP04	Software Lab IV	CO1	Students should able to design a basic web site using HTML and CSS to demonstrate responsive web design
			CO2	Students should able to display and insert data using PHP and MySQL
			CO3	Students should able to test, debug, and deploy web pages containing PHP
			CO4	Understand the basic commands in Linux.
			CO5	Practice shell scripting and essential shell programming
4		Operational Research	CO1	To use different mathematical modelling techniques utilizing Operations Research methodology.
			CO2	To find optimal solutions to problems
			CO3	To learn various methods that are used for quantitative decision making
			CO4	Able to realize that managerial problem situations have both quantitative and qualitative considerations that are important in the decision-making process.
5	CA5CRT14	Computer Networks	CO1	Students should understand the basic concepts of computer networks.
			CO2	Students should be able to know in depth about bandwidth utilization techniques
			CO3	Understand error control and flow control in data communication



			CO4	Understand various protocols in Data link, Network, Transport and Application layers
			CO5	Understand network security
5	CA5CRT15	IT & Environment	CO1	Students should able to recognize the importance of environment and the sustainable of natural resources
			CO2	Students should able to analyze interaction between social and environmental processes.
			CO3	Students should able to use scientific reasoning to identify and understand environment problems and evaluate potential solutions.
			CO4	Students should able to visualize the impacts of human activities on Environment and role of society in these impacts.
5	CA5CRT16	Java Programming Using Linux	CO1	Students should able to acquire the knowledge of the structure and model of the Java programming language,
			CO1	Students should able to use the Java programming language for various programming technologies
			CO3	Students should able to evaluate user requirements for software functionality required to decide whether the Java programming language can meet user requirements

