Name of the Programme :Computer Science
Programme : UG

SEMESTER I			
S No	**Course Code**	**Course Name**	**Course outcome**
1.	15UCSC11	Digital Principles and C Programming	• Understand the functions of basic electronic gates. • Obtain a basic knowledge of digital electronic circuits. • Design sequential and combinational circuits such as flip-flop, half-adder ad full-adder etc. • Develop their art of programming in c. • Write codlings using branching and looping with c. • Write codlings with the knowledge of arrays, structures, unions etc.
2.	15UCSC1P	Programming in C lab	• .Understand the fundamentals of C programming • Utilize looping and decision making statements to solve the problem' • Skilfully implement different operations on arrays • Use functions to solve the given problem • Understand in pointers, structures and unions • Acquire knowledge to implement file operations in C programming
3.	15UCSN11	Introduction to Computer Science	• Obtain the basic knowledge in computer science. • Familiarize Understand the basic concepts, terminology of computer science and familiar use the use of computer based applications. • Acquire knowledge in the functionality of CPU and ALU. • Gain knowledge in the basics of internet and its functionality, which leads in improvisation of computer skill.
4.	15UCSE1P	Digital lab	• Understand different number systems, codes, logic gates Boolean laws & theorems • Analyze and design various combinational and sequential circuit. • Design & implement different types of combinational logic circuit using logic gates.

			• Design & implement different type's of sequential logic circuits using flip-flop.
SEMESTER II			
1.	15UCSC21	Advanced C and OOPs with C++	• Understand the difference between object oriented programming and procedural oriented languages and data types in c and C++ • Develop programmes using C and C++ features such as composition of objects, operator overloading, inheritance, polymorphism etc • Understand the concept of object-oriented language, and create a static object functions and a dynamic behavioural functions of the system. • Understand the approaches to class design and object design, and the techniques of translating design to implementation. • Acquire knowledge in object-oriented language and procedural oriented language to provide solutions to the real-world software develop problems. • Simulate the problem in subjects like operating system, computer networks and real world problems.
2.	15UCSE21	Computer Organization	• Understand the basic structure of computer. • Perform computer arithmetic operations. • Understand the control unit operations. • Understand the concept of cache mapping techniques. • Understand the concept of I/O organization. • Conceptualize instruction level parallelism.
3.	15UCSN21	Introduction to Internet	• Enrich knowledge in origin and growth of internet. • Gain knowledge to send mail and subscribe in news groups. • Develop simple websites. • Acquire knowledge to access internet connection.
4.	15UCSC2P	Advanced C and C++ Programming Lab	• Understand the Advanced concepts of C • Exposed to create classes and Objects • Gain familiar it's with use and Access of Constructor and Destructor • Acquire skills to implement the concepts of

			Function overloading & operator Overloading • Understand the Concepts of Inheritance • Gain the knowledge in File Operation & Templates
SEMESTER III			
1.	15UCSC31	Object Oriented Programming with Java	• Understand the difference between object oriented programming and procedural oriented languages • Understand the object oriented programming concepts in problem solving • Understand the designing of complex classes: friend functions and static member functions, inline functions, constant functions • Understand the inheritance: single inheritance, multi-level inheritance, hierarchical inheritance, hybrid inheritance and multiple inheritance • Understand the file handling: Writing and reading data from the file, reading and writing the objects into the file • Understand the concept of abstract classes and interfaces • Ability to understand the Exception Handling: Catch, block, make user-defined exceptions. • Understand the concepts of Objects, Classes, Methods, Constructors and Destructors • Understand the full set of Event driven UI widgets and other components, including windows, menus, buttons, checkboxes, text fields, scrollbars and scrolling lists, using Swings
2.	15UCSC3P	Object Oriented Programming with Java Lab	• Understanding the concepts of Operators • Gain skill to Implement the concepts of Method Overloading • Understanding in concepts of Various Inheritance • Implement the concepts of Interface • Understand the concepts of Dynamic Method Dispatch • Implement the concepts of Multithreading • Work skilfully with Packages • Apply the concepts of String
3.	15UCSC3	Data Structures and	• Identify appropriate data structure as applied to

	2	Algorithms	specified problem definition • Acquire skill to Handle operations like searching, insertion, deletion, traversing mechanism etc. on various data structures • Gain knowledge to describe and simulate various linear data structures like stacks, queues, linked lists using static and dynamic allocation and use them in solving problems • Acquire knowledge to simulate nonlinear data structures like binary search tree and use them in designing applications like sorting, expression trees etc
SEMESTER IV			
1.	15UCSC41	Relational Database Management System	• Understand the database concepts • Gain adequate knowledge to design various database models, schemas and SQL statements • Understand the insights of security and authorization • Improve database efficiency using normal form. • Qualify to write queries using algebraic and calculus notations • Access data from various databases.
2.	15UCSC4P	RDBMS Lab	• Create table with necessary fields. • Obtain knowledge to Capable to create data from multiple tables using DDL Commands • Familiarizing in adding constraints at schema designing • Ability to work with data and string function. • Qualify to through built-in and user defined errors. • Understand the usage of triggers, cursor, procedures are used.
3.	15UCSO41	Management Information System	• Understand the leadership role of Management Information Systems • Identify the role of information systems in influencing decision making processes • Ability to understand the leadership role of Management Information Systems in achieving business competitive advantage through informed

			decision-making • Understand the major functional areas of Business • Understand the fundamental database concepts and apply these concepts to the design and development of relational databases • Gain knowledge in analytical and reflective skills in decision making.
4.	15UCSO42	Assembly Language Programming : Microprocessor and Microcontroller	• Understand the architecture and programming of the microprocessor 8085. • Understand the interface and various applications of microprocessor. • Understand the microprocessor applications and interface techniques. • Understand the 8085 microprocessor kit, knowledge of 8085 instruction set and utilize it in applications. • Understand the real mode Memory addressing and interface in various devices to the microprocessor. • Gain knowledge about architecture and programming and various applications in advanced microprocessor
5.	15UCSO43	Computer Graphics and Multimedia	• Analyse the Basic output primitive, drawing algorithms along with 2D Transformation concepts • Learn the core concepts of CG • Design algorithms for graphics applications • Gain knowledge of Windows Clipping & view object representation in relation to images displayed on screen • Create interactive graphics applications • Discern the rapid change of technology & methodology in multimedia environment
6.	15UCSV41	Numerical Ability	• Solve number problems, probability and profit and loss. • Develop reasoning ability. • Got introduction to the competitive exams. • Acquire knowledge to solve train and boat, work and age problem.
SEMESTER V			
1.	15UCSC51	System Software and	• Understand system software's such as assembler,

		Operating System	interpreter, linker, loader and compilers • Understanding towards design for Intermediate Code Generation in compiler. • Understand the principles and working of computer systems. • Learn different types of operating systems along with concept of file systems and CPU scheduling algorithms used in operating system • Acquire knowledge in memory management and deadlock handling algorithms. • Understand the process and scheduling algorithms
2.	15UCSC52	ASP .NET	• Gain knowledge in server side web applications • Attain skills in working standard controls • Acquire knowledge in validation control types and its usage • Acquire in depth skill to implement login control, various menu control and database control for their website • Skilfully handle master page and themes • Gain Knowledge on types of web services and web security
3.	15UCSC5P	.NET Lab	• Create simple application using web controls Work with master pages, themes & ad rotator control • Expressed use calendar control, tree view control, login control & validation controls • Ability to query textbox and displaying records by using database • Ability to insert record into a database & delete record from a database • Develop Data binding using data grid & data grid control template • Gain knowledge in Data grid hyperlink & data grid button column • Get knowledge to work in inheritance, interface and constructor • Gain knowledge to work on stored procedure in SQL server • Work on crystal reports and graphics

4.	15UCSC5Q	PHP Lab	• Gain knowledge in Basic HTML Tags • Learn how to embed PHP coding with HTML Tags • Acquire the knowledge in File Uploading, date and Time Functions • Analyze the concepts of Cookies & Sessions and apply in Websites • Familiarization in Validation • Qualify to create Database in SQL and learn to insert, Update and Delete rows in SQL table from PHP
5.	15UCSO51	R Tool	• Gain knowledge in working with R tool. • Enhance the knowledge of vectors and bar charts. • Learn about decision making and working with R Lists. • Gain the ability to work with different packages. • Understand the concept of R programming. • Develop the art of programming.
6.	15UCSO52	Mobile Application Development	• Apply general programming knowledge in the field of developing mobile applications • Learn specific requirements, possibilities and challenges in developing for a mobile context • Get understanding work on Android Development Environment • Develop effective .apk files • Understand interaction between user interface and underlying application infrastructure • Develop and design work including developing prototype that can be evaluated with specified user group • Enhance practical skills and knowledge to construct software for a mobile application
7.	15UCSO53	Data Mining and Data Warehousing	• Understand warehouse architecture. • Gain knowledge on various data storage models. • Retrieve interesting patterns. • Acquire skills to plot data in multidimensional space. • Qualify to generate rule from data-set. • Gain Familiarity with classification algorithm.

8.	15UCSJ51	On Job Training	• Understand Corporate work culture • Enabling to work as learn • Develop project • Exposure to company environment
9.	15UCSS5P	Soft Skill Training	• Identify the significance of softskills in working environment • Learn to connect and work with others to achieve a set of task • Ability to handle emotions and respect for the opinions,personal space • Ability to Develop self-motivation,raised aspirations and beliefs in one's own abilities • Excel with focused approach in working environment • Ability to communicate effectively with creativity
10.	15UCSS5Q	UML Lab	• Recognize the difference between various object relationships • Construct various UML models using the appropriate notation. • Analyse and design complex problems. • Design case documents that capture requirements for a software system.
SEMESTER VI			
1.	15UCSC61	Software Engineering	• Evaluating and selecting projects against strategic, technical and economic criteria and use a variety of cost benefit evaluation techniques for choosing among competing project proposals • Learn different software development process models and software engineering principles and develop an ability to apply them to software design of real life problems • Monitor and track project deadlines and produce a work plan and resource schedule • Understanding towards teamwork and quality management in software project management • Create a test plan for the software • Analyze and test a software system, when it is evolved to accommodate a set of change

			requirements such as adding new functionalities, bug fixing
2.	15UCSC6P	DTP and Multimedia Lab	• Acquire skills to work with various designing tools • Acquire Creativity in banner / logo / invitation / visiting card designing • Develop various effects on images using coreldraw • Edit photo using photo editor tool • Create graphical designs • Apply various animation on images
3.	15UCSC62	Computer Networks	• Learn the fundamentals of computer science. • Gain knowledge in the functionalities of each and every layer in network. • Ability to realize and compare different LAN topologies. • Implement and Compare the performance of Data Link Layer protocols. • Analyze the services and features of the various layers in the protocol stack. • Differentiate different routing algorithms and their usage.
4.	15UCSO61	Software Testing	• Gain knowledge to write Test cases and Test Scripts for different types of testing • Learn Methods to implement Test generation from requirement • Implementation of test plan, reporting and its practices in real IT projects • Apply project metrics in QA • Acquire skills to work in all kinds of testing methodologies • Use manual testing and automation testing tools
5.	15UCSO62	Computer Security	• Identify the major types of threats to information security and the associatedattacks. • Develop strategies to protect organization information assets from common attacks. • Understand how security policies, standards and practices are developed. • Understand the role of management in enforcing security policies, standards and practices. • Understand firewalls and packet filtering.

			• Design and implement firewall solutions. • Understand the role of cryptography in information security.
6.	15UCSO63	Cloud and Information Storage Management	• Gain deep knowledge in Cloud Computing Concepts • Qualify to understand the concepts of Storage System Architecture • Familiar use with Networked Storage Concepts • Gain Knowledge in Information Storage Systems • Acquire skills to know Remote replication technologies & backup Recovery • Gain knowledge in Information Security and Virtualization in Applications
7.	15UCSS6P	Image Processing Tool Lab	• Understand the basic concepts of Image Transformation • Learn how to restore and enhance various kinds of images • Work with different types of noise models • Gain knowledge in implementing Image processing in research
8.	15UCSV61	Biometrics	• Learn privacy issues of biometric technology. • Familiarisation in friction ride pattern and feature • Ability to match finger print and palm print. • Ability to know image acquisition and face detection.