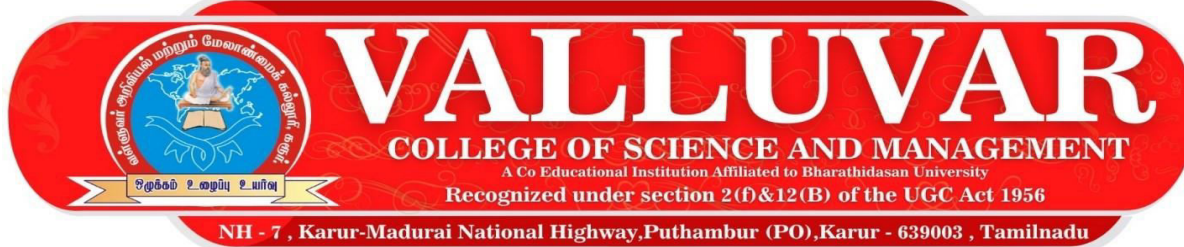## DEPARTMENT OF COMPUTER SCIENCE
## COURSE OUTCOMES OF UNDER GRADUATE PROGRAMMES
### (2016 – 2017 onwards)

**Name of the Programme: B. Sc., Computer Science**  **Semester – I**

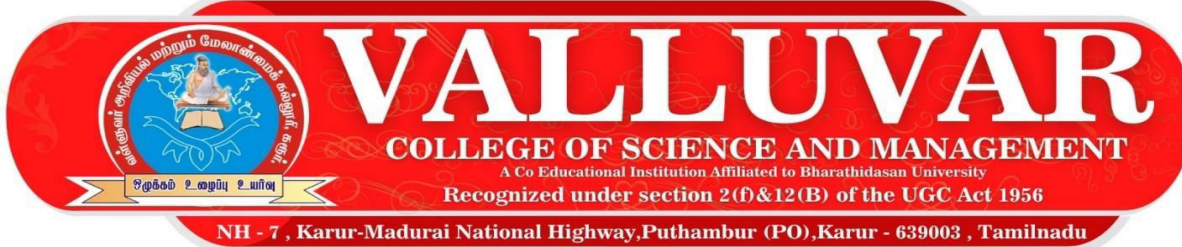| Course Code | Name of the Course | Course Outcomes | |
|---|---|---|---|
| **16SCCCS1** | **PROGRAMMING IN C** | **CO 1** | Understand the various operator in C |
| | | **CO 2** | Understand the decision making for Branching and Looping |
| | | **CO 3** | Know arrays, arrays types, string handling functions |
| | | **CO 4** | Know the concept pointers, fire handling, input output operations |
| | | **CO 5** | Understand the Linked lists and Pre-processor |
| **16SCCCS1P** | **PROGRAMMING IN C (P)** | **CO 1** | To impart practical training in C Programming Language |
| | | **CO 2** | Understand the basic terminology used in computer programming |
| | | **CO 3** | Write, compile and debug programs in Language |
| | | **CO 4** | Create programs involving decision structures, loops, strings and functions |
| | | **CO 5** | Design programs involving structures and pointers |

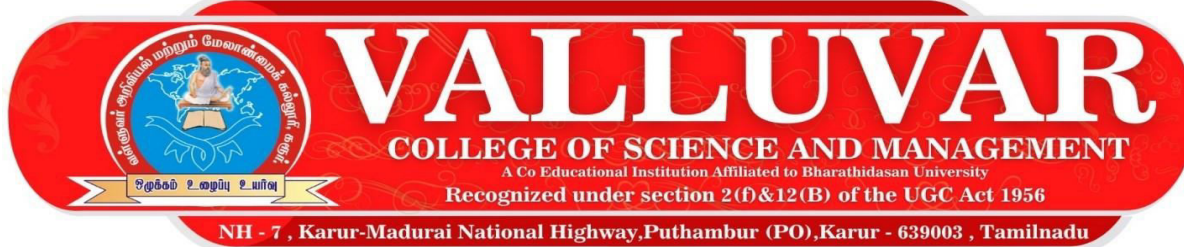| Name of the Programme: B. Sc., Computer Science | | | Semester – II |
|---|---|---|---|
| **Course Code** | **Name of the Course** | **Course Outcomes** |
| 16SCCCS2 | **PROGRAMMING IN C++** | CO 1 | To apply good programming principles to the design and implementation of C++ programs and also understanding of primitive data types, values, operators and expressions in C++. |
| | | CO 2 | Identify the necessary properties of good problem-solving techniques that are essential for Object Oriented Programming, C++ |
| | | CO 3 | Design and implement code that includes the reuse of both existing code and calling functions in the C++ libraries |
| | | CO 4 | Be acquainted with the concept of pointers, file handling and I/O operations |
| | | CO 5 | Understand the Linked lists and Pre-processor |
| 16SCCCS2P | **PROGRAMMING IN C++ LAB** | CO 1 | To impart practical training in C++ Programming Language |
| | | CO 2 | Understand the basic terminology used in Object Oriented Languages |
| | | CO 3 | Write, compile and debug programs in C++ Language |
| | | CO 4 | Create programs involving decision structures, loops, strings and functions |
| | | CO 5 | Design programs involving structures, pointers and Files Handling Mechanisms |
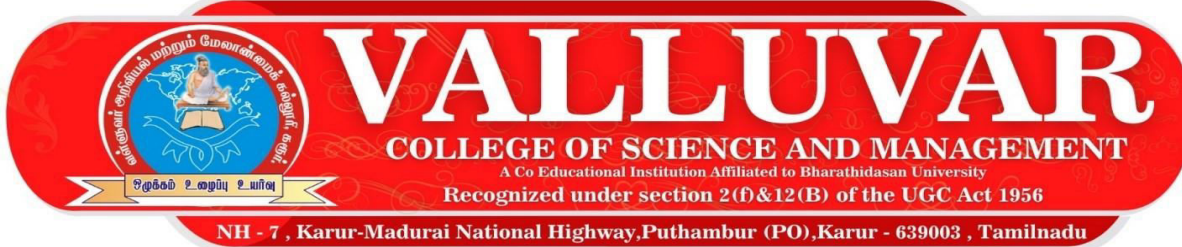
**Name of the Programme: B. Sc., Computer Science**　　　　　**Semester – III**

| Course Code | Name of the Course | Course Outcomes | |
|---|---|---|---|
| 16SCCCS3 | **PROGRAMMING IN JAVA** | CO 1 | Develop the program using Object oriented Methodology using JAVA |
| | | CO 2 | Apply the basic Terminology used in JAVA |
| | | CO 3 | Make use of the concepts of packages and Interfaces |
| | | CO 4 | Implement the concepts of multithreading and /or handle run time errors for Java applications |
| | | CO 5 | Develop real time GUI applications using applet and AWT also Utilize collection framework and /or file management in Java applications |
| 16SCCCS3P | **PROGRAMMING IN JAVA LAB** | CO 1 | To impart practical training in JAVA Programming Language |
| | | CO 2 | Apply the Concept of inheritance for code reusability |
| | | CO 3 | Acquire the Knowledge in the Concept of multithreading |
| | | CO 4 | Apply to build a real-world application using the Concept of Polymorphism and inheritance |
| | | CO 5 | Acquire the Knowledge in the Concept of Graphical program as APPLETs |
| 16SNMECS1 | **WORKING PRINCIPLES OF INTERNET** | CO 1 | To understand the working Principles of Internet |
| | | CO 2 | Underlying the basic concepts of Internet and communication through Internet |
| | | CO 3 | To acquire the knowledge in Common Internet Tools |
| | | CO 4 | Understand the Multimedia on Internet |
| | | CO 5 | To be aware of Safeguarding the Internet |

**Name of the Programme: B. Sc., Computer Science**          **Semester – IV**

| Course Code | Name of the Course | | Course Outcomes |
|---|---|---|---|
| **16SCCCS4** | **DATABASE SYSTEMS** | CO 1 | Demonstrate the basic elements of a relational database management system |
| | | CO 2 | Identify the data models for relevant problems |
| | | CO 3 | Design entity relationship and convert entity relationship diagrams into RDBMS and formulate SQL queries on the respect data into RDBMS and formulate SQL queries on the data |
| | | CO 4 | Demonstrate their understanding of key notions of query evaluation and optimization techniques |
| | | CO 5 | Extend normalization for the development of application software |
| **16SCCCS4P** | **DATABASE SYSTEMS LAB** | CO 1 | To Impart Practical Training in MySQL-Creation of MySQL table and perform the following basic MySQL operations |
| | | CO 2 | Develop MySQL queries to implement the set operations and aggregate functions |
| | | CO 3 | Develop MySQL queries to implement following join operations and nested subqueries |
| | | CO 4 | Develop MySQL queries to create a views and string operations |
| | | CO 5 | Develop a banking enterprise that perform all basic query operations |
| **16SNMECS2** | **FUNDAMENTALS OF INFORMATION TECHNOLOGY** | CO 1 | To Provide the Basic Concepts in Information Technology |
| | | CO 2 | Develop the knowledge of working with Computers |
| | | CO 3 | Understand the basic Computer Software and also Database Management Systems |
| | | CO 4 | Understand the Computer Networks |
| | | CO 5 | Understand the applications of Computer Systems |
| **16RSBE4:1** | **PAGE MAKER** | CO 1 | Introduction to various versions, concepts and applications of PageMaker |
| | | CO 2 | Working with various tools |
| | | CO 3 | Working with platters and various templates |
| | | CO 4 | Positioning ruler, typing text, basic formatting |
| | | CO 5 | Creating and opening publications |

| Name of the Programme: B. Sc., Computer Science | | | Semester – V |
|---|---|---|---|
| **Course Code** | **Name of the Course** | **Course Outcomes** | |
| 16SCCCS5 | DATA STRUCTURES AND ALGORITHMS | CO 1 | Understand the Concept of Stack and Queue Operations |
| | | CO 2 | Implementation of the various nonlinear data structures with their representation and perform different operations on them |
| | | CO 3 | Understand the concepts of Searching and Sorting techniques |
| | | CO 4 | Understand the Storage Techniques while Structure the Data |
| | | CO 5 | Understand and applications of the Data Structures |
| 16SCCCS6 | COMPUTER NETWORKS | CO 1 | To understand the Design and Organization of Computer Networks |
| | | CO 2 | Understand the Topology and Protocols |
| | | CO 3 | Implementation of Network Layer services with the Internet Protocols |
| | | CO 4 | Understand the transformation of data through TCP Services |
| | | CO 5 | To Provide basic understand in the Application layer in Client-server Programming |
| 16SCCCS7 | DIGITAL ELECTRONICS AND MICROPROCESSOR | CO 1 | Convert different type of codes and number systems which are used in digital communication and computer systems. |
| | | CO 2 | Analyse different types of digital electronic circuit and know the techniques to prepare the most simplified circuit using various mapping and mathematical methods. |
| | | CO 3 | Design different types of digital electronic circuits for particular operation, within the realm of economic, performance, efficiency, user friendly and environmental constraints. |
| | | CO 4 | Apply the fundamental knowledge of analog and digital electronics to get different types analog to digitalized signal and vice-versa converters in real world with different changing circumstances |
| | | CO 5 | Assess the nomenclature of Intel 8085 and apply the memory devices in different types of digital circuits for real world application. |

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|---|---|---|---|
| **16SCCCS7P** | **DIGITAL ELECTRONICS AND MICROPROCESSOR LAB** | **CO 1** | To Impart Practical Training related to Digital Electronics and Microprocessors |
| | | **CO 2** | Practical Digital Electronics Experiments for Verification of Logical gates and Construction of half and Full adder |
| | | **CO 3** | Implementation of K Map, Shit Registers and Up Down Counters |
| | | **CO 4** | Microprocessor Experiments for Eight Bit addition / Subtraction, Number Conversion |
| | | **CO 5** | Perform the Data transfer and finding Maximum number in the set of Inputs |
| **16SMBECS1:1** | **SOFTWARE ENGINEERING** | **CO 1** | To provide knowledge of the various phases of Software Engineering Process |
| | | **CO 2** | ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics |
| | | **CO 3** | Familiarize the basic object-oriented Concepts and User Interface design |
| | | **CO 4** | Understand the Software Measurement and Metrics |
| | | **CO 5** | Develop professional expertise in Web Engineering and Web services |
| **16RSBE4:2** | **CORELDRAW** | **CO 1** | Basic features of CorelDraw |
| | | **CO 2** | Use of varies tools. Setting up drawing pages using ruler, grid and gridlines |
| | | **CO 3** | Drawing and shaping object, drawing lines, curves, dimensions lines |
| | | **CO 4** | Special effects to bitmaps by 3d |
| | | **CO 5** | Working with style & templates |
| **16RSBE4:3** | **DREAMWEAVER** | **CO 1** | Use Adobe Dreamweaver to create personal and/or business websites following current professional and/or industry standards |
| | | **CO 2** | Use critical thinking skills to design and create a basic, multi-page website |
| | | **CO 3** | Create a template and wireframe for a website |
| | | **CO 4** | Create links, add images to a web page, use tables for layout |
| | | **CO 5** | Use Dreamweaver help to research and describe role of W3C in advancing HTML and CSS |

| Name of the Programme: B. Sc., Computer Science | | | Semester – VI | |
|---|---|---|---|---|
| **Course Code** | **Name of the Course** | **Course Outcomes** | | |
| 16SCCCS8 | **OPERATING SYSTEMS** | CO 1 | Introduction to Operating systems. Hardware, Software, Firmware Program development | |
| | | CO 2 | Understand fundamental operating system abstractions such as processes, threads, files, semaphores, shared memory regions | |
| | | CO 3 | Analyze important algorithms e.g., Process scheduling and memory management algorithms | |
| | | CO 4 | Categorize the operating system's resource management techniques, dead lock management techniques, memory management techniques | |
| | | CO 5 | Demonstrate the ability to perform Disk space allocation strategies and File allocation table (FAT) | |
| 16SCCCS9 | **PROGRAMMING IN PHP** | CO 1 | Introduction to the Scripting languages through PHP | |
| | | CO 2 | Understand the essentials of PHP | |
| | | CO 3 | Analyse the usage of Object-oriented Concepts in PHP | |
| | | CO 4 | Capable to handle the File, Session, Cookie and FTP | |
| | | CO 5 | Understand the AJAX Concepts | |
| 16SCCCS9P | **PROGRAMMING IN PHP LAB** | CO 1 | To Impart Practical Training in PHP Programming Language | |
| | | CO 2 | Be Familiar with the Arrays and User defined functions | |
| | | CO 3 | Working with File Handling mechanisms | |
| | | CO 4 | Design the Programs to handle session and Cookie | |
| | | CO 5 | Design Program involving the AJAX Components | |
| 16SMBECS2:2 | **CLOUD COMPUTING** | CO 1 | To understand the concepts in Cloud Computing and its Security | |
| | | CO 2 | Introduction to Cloud Computing and its architecture | |
| | | CO 3 | Understand the Data Storage and Cloud Services | |
| | | CO 4 | Impact on the security in cloud Computing environment | |
| | | CO 5 | Understand the Practical Cloud applications of Google and Amazon | |