

AUXILIUM COLLEGE OF ARTS AND SCIENCE FOR WOMEN REGUNATHAPURAM,PUDUKKOTTAI(DT)

DEPARTMENT OF COMPUTER SCIENCE

COURSE OUTCOMES

B.Sc Computer Science

SUBJECT : PROGRAMMING IN C

SUBCODE: 16SCCCS1

To learn the syntax of all the statements and to provide programming skills in C

C01	C02	C03	C04	C05	C06
Understand Constants, Variables & Data Types	Identify Operators and Expressions	Identify Decision Making and Branching Statements	Understand Arrays, Strings, Structures and Unions	Understand Pointers	Understand Files Management in C

SUBJECT : PROGRAMMING IN C LAB

SUBCODE: 16SCCCS1P

To enrich the practical knowledge in C programming.

C01	C02	C03	C04	C05	C06
Create a Program to convert temperature from degree Centigrade to Fahrenheit	Create a Program to find whether given number is Even or Odd.	Create a Program to using switch statement to display Monday to Sunday	Create a Program to find Multiplication of Two Matrices	Create a Program to reverse a string using Strings	Create a Program to create a file containing Student Details

SUBJECT : PROGRAMMING IN C++

SUBCODE: 16SCCCS2

To learn the syntax of all the statements and to provide programming skills in C++

C01	C02	C03	C04	C05	C06
Understand Principles of oops	Classes and Objects, constructor and destructor	Destructor, Operator Overload	Inheritance , Virtual Functions and Polymorphism	Managing Console I/o Operations	Working with files and Exception Handling

SUBJECT : PROGRAMMING IN C++ LAB**SUBCODE: 16SCCCS2P**

To enrich the practical knowledge in C++ programming.

C01	C02	C03	C04	C05	C06
Create a program using a class	Create a Program to read an integer and find the sum of all the digits	Create a Program to using operator overloading to add addition of two complex numbers and matrix multiplication	Create a Program to prepare pay roll of an employee using inhertiance	Create a Program to using pointers to find the number of vowels in a given text and palindrome	Create a Program to display student mark list

SUBJECT : PROGRAMMING IN JAVA**SUBCODE: 16SCCCS3**

To learn Object-Oriented programming concepts and techniques

C01	C02	C03	C04	C05	C06
To provide an exposure in basic concepts of JAVA	To understand the syntax & methodology of programming in JAVA	To study the method of application development using Database connectivity	Understand the OOPs concepts	Understand the overloading	Understand the Multithreading

SUBJECT : PROGRAMMING IN JAVA LAB**SUBCODE: 16SCCCS3P**

To develop practical skills in Java Programming.

C01	C02	C03	C04	C05	C06
To create dynamic website using Java.	Create a java program to ncr value of given numbers using recursive function.	Create a java program to prepare EB-bill using packages	Create a Java program to implement the concept of Exception Handling	Create a java program for simple calculator using AWT controls.	Create a java program to demonstrate interface concept

SUBJECT : DATABASE SYSTEMS**SUBCODE: 16SCCS4**

Classify the data structure algorithms used to efficiently store and retrieve information in database systems

C01	C02	C03	C04	C05	C06
Identify Structure Query Language statements used in creation and manipulation of Database .	Identify the methodology of conceptual modeling through Entity Relationship model.	Develop an understanding of the differences between OODBMS, ORDBMS and RDBMS and the practical implications of each approach.	Classify the general Design for database applications , rational models, ER diagrams.	Develop and evaluate a real database application using a database management system	Write down the query for processing and transaction of data in processor.

SUBJECT : DATABASE SYSTEMS LAB**SUBCODE: 16SCCS4P**

To create a table and perform the following basic mysql operations

C01	C02	C03	C04	C05	C06
To create mysql queries to implement the following set operations	To create mysql queries to implement the following aggregate operations	To create mysql queries to implement the following join operations	To create mysql queries to implement the nested subqueries	To develop mysql queries to create a views	To develop mysql queries to implement string operations

SUBJECT : DATA STRUCTURE AND ALGORITHMS**SUBCODE: 16SCCS5**

Classify the design and applications of linear, tree, and graph structures.

C01	C02	C03	C04	C05	C06
Describe the working principle of various Algorithms and Analysis of it's techniques.	Write down the algorithm for solving problems like sorting, searching, insertion and deletion of data	Describe the algorithms to analyze and compare the efficiency for Big-O notation.	Construct a projects for implementation of the various data structures	Describe the logical ability and programming skills.	Identify to solve problem involving graphs, trees and heaps.

SUBJECT : COMPUTER NETWORKS**SUBCODE: 16SCCS6**

Describe the process and components of Data Communications System

C01	C02	C03	C04	C05	C06
Identify the different types of network topologies and protocols and to explore different types of network devices and their functions within a network.	Classify general skills for subnetting and routing mechanisms.	Describe the basic protocols of computer networks, and how they can be used in network design and implementation.	Write down the fundamental concepts of computer networking.	Describe the basic taxonomy and terminology of the computer networking area.	Identify the expertise in some specific areas of networking such as switching, security and to have knowledge about various network protocols

SUBJECT : DIGITAL ELECTRONICS AND MICROPROCESSOR

SUBCODE: 16SCCS7

To understand and examine the structure of various number systems and its application in digital design

C01	C02	C03	C04	C05	C06
To learn the number system and Logic gates and circuits	Understand the Fundamentals of Boolean Algebra	Understand the Logic Gates	Understand the Combinational Logic circuits	Understand the Sequential Logic circuits	Describe the evolution of microprocessor

SUBJECT : SOFTWARE ENGINEERING

SUBCODE: 16MBECS2:1

Capable of designing a system, component, process to meet desired need.

C01	C02	C03	C04	C05	C06
Able to analyze, design, verify, validate, implement, maintain software systems.	Able to procure knowledge about basic software engineering methods	Able to know how to design software and about various software process models.	Able to learn and explore quality control and System engineering.	Able to obtain knowledge about Software Engineering.	To know how to use Software Engineering and Software Engineering tools

SUBJECT : OPERATING SYSTEM**SUBCODE: 16SCCS8**

Identify the knowledge about functions, structures and history of operating systems.

C01	C02	C03	C04	C05	C06
Describe the various process management concepts including scheduling, synchronization, and deadlocks.	Identify the detailed knowledge about concepts of memory management including virtual memory.	Classify how the files are allocated, shared and managed.	Describe the basic knowledge about operating systems and its underlying functions.	Classify the characteristics of process control, memory management scheduling, I/O and files.	Classify the characteristics to implement simple OS mechanisms

SUBJECT : PROGRAMMING IN PHP**SUBCODE: 16SCCS9**

Develops skills to create server-side scripts using PHP

C01	C02	C03	C04	C05	C06
Introduce the essential of PHP	creation of functions and reading data in web pages	Describe oops and advanced of oops	Working with database, session,cookies and FTP	Describe Advanced AJAX	Describe the importance of CSS in web development

SUBJECT : PROGRAMMING IN PHP LAB**SUBCODE: 16SCCS9**

To design simple web Application using PHP and MySQL.

C01	C02	C03	C04	C05	C06
Develop a PHP program to find the factorial number and conditional statement	Develop a PHP program to find the maximum value in a given multi dimensional array and GCD of two numbers using user-defined functions .	Develop a PHP program web page to generate multiplication table for a given number and compute one's age on a given date	Develop a PHP program to download a file from the server and to store the current date and time in a COOKIE and display the 'Last Visited' date and time on the web page	Develop a PHP program to store page views count in SESSION, to increment the count on each refresh and to show the count on web page	Write a program to draw the human face

SUBJECT : COMPUTER GRAPHICS**SUBCODE: 16SMBESC2:2**

To Learn fundamental concepts and theory of computer graphics.

C01	C02	C03	C04	C05	C06
To Overview of computer graphics	Explain the applications, areas, and graphic pipeline, display and hardcopy technologies.	Apply and compare the algorithms for drawing 2D images also explain aliasing, anti aliasing and half toning techniques.	Discuss OpenGL application programming Interface and apply it for 2D & 3D computer graphics.	Analyze and apply clipping algorithms and transformation on 2D images.	Solve the problems on viewing transformations and explain the projection and hidden surface removal algorithms.

SUBJECT : MINI PROJECT**SUBCODE: 16SMBECSPW**

Understand programming language concepts, particularly Java or C# along with object oriented concepts as well as software engineering principles

C01	C02	C03	C04	C05	C06
Understand programming language concepts, particularly Java or C# along with object oriented concepts as well as software engineering principles	Plan, analyze, design a software project and demonstrate the ability to communicate effectively in speech and writing	Introduce with major software engineering topics	Learn about and go through the software development cycle	Learn about different software development process models and how to choose an appropriate one for a project	Gain confidence at having conceptualized, designed, and implemented a working, medium sized project with their team

AUXILIUM COLLEGE OF ARTS AND SCIENCE FOR WOMEN REGUNATHAPURAM,PUDUKKOTTAI(DT)

DEPARTMENT OF COMPUTER SCIENCE

COURSE OUTCOMES

MASTER OF COMPUTER SCIENCE

SUBJECT : MATHEMATICAL FOUNDATION FOR COMPUTER SCIENCE

SUBCODE: P16CS11

Identify to express a logic sentence in terms of predicates, quantifiers, and logical connectives.

C01	C02	C03	C04	C05	C06
Determine when a function is 1-1 and "onto".	Classify the use of tree and graph algorithms to solve problems.	Write down the Boolean functions to evaluate and simplify expressions of Boolean algebra.	Identify the rules of inference, tests for validity, and methods of proof including direct and indirect proof forms.	Determine the domain and range of a discrete or non-discrete function, graph functions, identify one-to-one functions, perform the composition of functions, find and/or graph the inverse of a function, and apply the properties of functions to application problems.	Write down the operations of sets and use Venn diagrams to solve applied problems; solve problems using the principle of inclusion-exclusion.

SUBJECT : WEB TECHNOLOGIES

SUBCODE: P16CS12

Identify to design Web page using JavaScript, XML, JSP and ASP

C01	C02	C03	C04	C05	C06
Describe the fundamental concept of Internet, JavaScript, XML, JSP, ASP with a view to developing professional software	Describe the concept of networking in Internet.	Describe the concept of design and implementation of dynamic websites .	Describe the characteristics of Web Application.	Identify the concept to build web applications using ASP.	Describe the concept of client side script technologies.

SUBJECT : WEB TECHNOLOGIES LAB

SUBCODE: P16CS15P

To develop professional software development skills

C01	C02	C03	C04	C05	C06
To create a program for job listing in HTML	To check authorization user and conversion using javascript code block	To create a JSP program for user authentication	To create a JSP program for shopping cart and biodata	To create a ASP program using response and request objects	To create a ASP program for database connectivity

SUBJECT : DESIGN AND ANALYSIS OF ALGORITHMS

SUBCODE: P16CS13

Describe the basic concepts of algorithms and analyze the performance of algorithms

C01	C02	C03	C04	C05	C06
Classify the various searching, sorting and graph traversal algorithms.	Identify the concept of NP completeness .	Classify a better algorithm to solve the problems	Identify and Formulate the time complexity analysis for an Algorithm	Describe the usage of algorithm and evaluate its correctness	Describe the complexities of various problems in different domains.

SUBJECT : DISTRIBUTED OPERATING SYSTEMS

SUBCODE: P16CS14

To study the concepts of distributed computing systems and cryptography.

C01	C02	C03	C04	C05	C06
Identify the concepts of Distributed Operating System	To provide hardware and software issues in modern distributed systems.	To get knowledge in distributed architecture, naming, synchronization, consistency and replication, fault tolerance, security, and distributed file systems.	To analyze the current popular distributed systems such as peer-to-peer (P2P) systems will also be analyzed.	To know about Shared Memory Techniques	Have Sufficient knowledge about file access

SUBJECT : OOAD AND UML**SUBCODE: P16CS21**

Classify the working ability and grasping attitude to design and conduct object-oriented analysis and design experiments using UML, as well as to analyze and evaluate their models.

C01	C02	C03	C04	C05	C06
Describe the concept to analyze and design software systems, components to meet desired needs.	Identify the formula to solve the software development problems such as software requirements, specification, software design, and implementation.	Write down the essential and fundamental aspects of object-oriented analysis and design, for the purpose of specifying and developing software.	Identify the fundamental principles through advanced concepts of analysis and design using UML	Describe the clear instructions and information for applying the UML models	Describe Object Oriented Analysis and Design concepts and apply them to solve problems

SUBJECT : DISRIBUTED TECHNOLOGIES**SUBCODE:P16CS22**

Distributed system is to make it easy for users to access remote resources, and to share them with other users in a controlled manner

C01	C02	C03	C04	C05	C06
Understanding the challenges of distributed computing	Distributed computing practices through DOT net and java technologies	Describes the disconnected accesss	Understanding theAdvanced ADO net	Understanding theAdvanced ASP net	Identify the mobi\le application development in ASP net

SUBJECT : MOBILE COMMUNICATION**SUBCODE: P16CSE1A**

To make students familiar with various generation of mobile communication

C01	C02	C03	C04	C05	C06
Identify a native application using GUI components.	Describe the concept to develop an application using basic graphical primitives.	Identify an application using multi threading and RSS feed	Describe the importents of location identification using GPS.	Identify a model for new applications to hand held devices	Identify the multiple activities & associated layouts to an Android project.

SUBJECT : ARTIFICIAL INTELLIGENCE**SUBCODE: P16CSE2B**

Describe the different concept that AI program normally used to translate languages.

C01	C02	C03	C04	C05	C06
Classify the concept to recall the state of neural network components for residual connections and normalize layers.	Describe the concept to recall the basic ideas behind neural networks used for machine translation and sequence to sequence learning.	Describe the importance of constructing input samples that are able to fool neural networks	Classify the the essential components of gradient-based optimization in supervised learning problems.	Describe the impact of step sizes in gradient-based optimization	Discuss the usage of different neural network structures such as fully connected, convolution and pooling layers

SUBJECT : DISTRIBUTED TECHNOLOGIES LAB**SUBCODE: P16CS23P**

To developing professional software development skills

C01	C02	C03	C04	C05	C06
To create a project to insert, update and delete udimg disconnected access	To create a project to view the grid view,details view and form views	To developpe ad rotator, multiview and wizard control	To create a image control involving two hotspots	To developpe mobile web application	To create a web services that has an ASP.NET client

SUBJECT : DATAMINIG AND WAREHOUSING**SUBCODE: P16CS31**

Identify the charecteristics to analyze and explore the data.

C01	C02	C03	C04	C05	C06
Describe the various method of clustering the data and different type of application..	Classify the real knowledge about Data warehouse and Data mining.	Describe various method to use Data warehouse and Data mining tools.	Describe to learn and explore Data mining knowledge.	Identify a Data Warehousing, Data Mining and its applications.	Identify the concept to solve problems using various Classifiers

SUBJECT : COMPILER DESIGN**SUBCODE: P16CS32**

Describe the importance of designing and implementing a prototype compiler

C01	C02	C03	C04	C05	C06
Write down the various optimization techniques in compiler design.	Identify the usage of different compiler construction tools.	Describe the importance to learn the design principles of a Compiler	Identify the various parsing techniques in different levels of translation to optimize.	Identify the key concepts to generate machine codes effectively.	Describe the concepts to construct a parse tree and to explain parse tree existences.

SUBJECT : DATA MINING LAB**SUBCODE: P16CS33P**

Identify the knowledge about functions, structures and history of operating systems.

C01	C02	C03	C04	C05	C06
Describe the various process management concepts including scheduling, synchronization, and deadlocks.	Identify the detailed knowledge about concepts of memory management including virtual memory.	Classify how the files are allocated, shared and managed.	Describe the basic knowledge about operating systems and its underlying functions.	Classify the characteristics of process control, memory management scheduling, I/O and files.	Classify the characteristics to implement simple OS mechanisms

SUBJECT : ADVANCED COMPUTER ARCHITECTURE**SUBCODE:P16CSE3B**

To introduce the advanced processor architectures to the students.

C01	C02	C03	C04	C05	C06
Demonstrate concepts of parallelism in hardware/software	Discuss memory organization and mapping techniques	Describe architectural features of advanced processors	Interpret performance of different pipelined processors	Explain data flow in arithmetic algorithms	Development of software to solve computationally intensive problems

SUBJECT : NETWORK SECURITY**SUBCODE: P16CSE4B**

To impart knowledge related to the various concepts of network security

C01	C02	C03	C04	C05	C06
Overview of network security	understanding the symmetric ciphers and data encryption	understanding the data encryption standards	understanding the security practice	Describe the web security	Identify the system security

SUBJECT : CLOUD COMPUTING**SUBCODE: P16CS41**

Identify the strengths and limitations of cloud computing.

C01	C02	C03	C04	C05	C06
Identify the architecture, infrastructure and delivery models of cloud computing.	Classify the different project management in the cloud environment.	Write down the characteristics of cloud services.	Identify the concept CRM in cloud computing.	Classify the broad perceptive of cloud architecture.	Describe the importance of cloud model.

SUBJECT : WIRELESS SENSOR NETWORKS**SUBCODE: P16CS42**

To understanding wireless sensor nodes ,networks and tools

C01	C02	C03	C04	C05	C06
Introduction to wireless networks, architectures and technologies.	Wireless sensor network platforms: Hardware and Software	Communication architecture and protocols for WSN	Understanding the networking sensor	Describe the infrastructure establishment	Understanding the MAC protocols developed for WSN

SUBJECT : OPEN SOURCE LAB**SUBCODE: P16CS43P**

Discuss the insights of internet programming and implement complete application over the web

C01	C02	C03	C04	C05	C06
Describe the importance of HTML tags in designing static pages and separate design.	Identify the knowledge of algorithms to learn a variety of useful techniques.	Describe the ability to gather information about Free and Open Source Software projects.	Identify the basic ability to build and modify Open Source Software packages.	Classify the usage of one version control system to interface with other version control systems.	Identify the key concepts to contribute Open Source Software development projects.

SUBJECT : BIG DATA ANALYTICS**SUBCODE: P16CSE5B**

Able to import knowledge in Fundamentals, Big Data Analytics, Technologies and databases, Hadoop and Map Reduce Fundamentals

C01	C02	C03	C04	C05	C06
Describe the concept to choose suitable data analysis methods.	Identify the methods to analyze the data and its efficient use.	Identify the Fundamental knowledge for Big Data Analytics.	Describe the concept of working with big data platform and its analysis techniques	Identify an efficient algorithms for mining the data from large volumes.	Identify the concept of big data for useful business applications.

SUBJECT : MINI PROJECT**SUBCODE: P16CSPW**

To identify the specific knowledge and skills to do at the end of course

C01	C02	C03	C04	C05	C06
Understand project characteristics and various stages of a project	Understand the conceptual clarity about project organization and feasibility analyses	Analyze the learning and understand techniques for Project planning, scheduling and Execution Contro	An ability to use appropriate techniques, skills, and tools necessary for computing practice.	An ability to apply mathematical foundations, algorithmic principles, and computer science theory	An ability to apply design and development principles in the construction of software systems of varying complexity.