



IDHAYA COLLEGE FOR WOMEN, KUMBAKONAM

Programme: B.Sc. Computer Science

PO No.	Programme Outcomes upon Completion of B.Sc. Degree Programme, the Graduates will be able
PO1	To comprehend the basic concepts learnt and apply in real life situations with analytical skills.
PO2	To acquire skills and enhanced knowledge will be employable/become entrepreneurs or will pursue higher Education.
PO3	To acquire knowledge of modern software tools will be able to contribute effectively as software engineers.
PO4	To comprehend the related concepts to Computer Science with Allied papers.
PO5	To imbibe with ethical values and social concerns to ensure peaceful society.

Semester I

S. No	Course Code	Name of the Course	Course Outcomes
1.	22SCCCS1	Programming in C and Data Structures	<ul style="list-style-type: none"> ➤ To summarize the basic knowledge to develop C programs. ➤ To manipulate Looping, arrays and functions. ➤ To apply and write programs for solving real world problems.
2.	22SCCCS1P	Programming in C Lab	<ul style="list-style-type: none"> ➤ To develop programs for various concepts in C language. ➤ To understand and trace the execution of the list of programs. ➤ To solve data problems related to data structures.
3.	22SCACMM2A	Algebra Calculus	<ul style="list-style-type: none"> ➤ To explain the relationship between the derivative of a function as a function and the notion of the derivative as the slope of the tangent line to a function at a point. ➤ To derive reduction formula and thereby evaluate some standard integrals. ➤ To identify odd and even functions. Use that to determine Fourier series expansion of the given functions.
4.	22UGVED	Value Education	<ul style="list-style-type: none"> ➤ To apply the values in Thirukkural to be peaceful, dutiful and responsible in family and society. ➤ To develop character formation and sense of citizenship. ➤ To be attitudinal to follow the constitutional rights.

Semester II

S. No	Course Code	Name of the Course	Course Outcomes
1.	22SCCCS2	Programming in Java	<ul style="list-style-type: none"> ➤ To understand the concept of OOP as well as the purpose and usage principles of inheritance, polymorphism, encapsulation and method overloading. ➤ To identify members of a class and to implement them. ➤ To develop software using Java programming language, (using applet, AWT controls, and JDBC).
2.	22SCCCS2P	Programming in Java Lab	<ul style="list-style-type: none"> ➤ To develop Java programs to understand the OOP concepts. ➤ To develop simple programs with multiple threads. ➤ To develop java programs to connect databases and files.
3.	22SCACMM2B	Numerical Analysis and Probability	<ul style="list-style-type: none"> ➤ To solve algebraic and transcendental equations. ➤ To appreciate the importance of probability of random variables and understand the correlation and regression coefficients. ➤ To apply these methods to find numerical approximations and error estimates in a range of problems.
4.	22SCACMM2C	Operations Research	<ul style="list-style-type: none"> ➤ To acquire the basic concepts of LPP. ➤ To apply various methods for finding a solution of an LPP. ➤ To use the basic concepts of TP, AP and Network Problems to develop the problem solving skills.
5.	22PELPS1	Professional English for Physical Sciences I	<ul style="list-style-type: none"> ➤ To recognise student's own ability to improve their own competence in using the language. ➤ To use language for speaking with confidence in an intelligible and acceptable manner. ➤ To understand the importance of reading for life.
6.	22UGCES	Environmental Studies	<ul style="list-style-type: none"> ➤ To understand the environmental importance including interactions across local to global scales. ➤ To update and analyse environmental relationships and interactions of environmental components. ➤ To gain knowledge on importance of natural resources in a systematic way.

Semester III

S.No	Course Code	Name of the Course	Course Outcomes
1.	22SCCCS3	Programming in Python	<ul style="list-style-type: none"> ➤ To recall and understand the features of Python programming language. ➤ To illustrate various programming mechanism used in Python. ➤ To apply various language construct to write simple programs in Python.
2.	22SCCCS3P	Programming in Python Lab	<ul style="list-style-type: none"> ➤ To write simple programs using control structures, functions and strings. ➤ To develop programs using tuples, lists, sets and dictionary. ➤ To write simple programs using constructors, method overloading and inheritance.
3.	22SCACAP1A	Applied Physics I	<ul style="list-style-type: none"> ➤ To recall the basic concepts of electricity and its various laws. ➤ To solve basic electronics problems with AC circuits that involves capacitance, inductance, impedance, reactance and power calculations. ➤ To differentiate all the four number systems studied.
4.	22BNMEBB1	E-Commerce	<ul style="list-style-type: none"> ➤ To identify core concepts of marketing and the role of marketing in business and society. ➤ To appreciate the global nature of marketing and appropriate measures to operate effectively in international settings. ➤ To develop marketing strategies based on product, price, place and promotion objectives.
5.	22PELPS2	Professional English for Physical Sciences – II	<ul style="list-style-type: none"> ➤ To attend interviews with boldness and confidence. ➤ To adapt easily into the workplace context, having become communicatively competent. ➤ To develop strategic competence that will help in effective communication.

Semester IV

S. No	Course Code	Name of the Course	Course Outcomes
1.	22SCCCS4	Database Management Systems	<ul style="list-style-type: none"> ➤ To understand the basic concepts of Database Systems. ➤ To know about SQL queries to interact with Database. ➤ To design a Database using ER Modelling.

2.	22SCCCS4P	Database Management Systems Lab	<ul style="list-style-type: none"> ➤ To write queries to manipulate data. ➤ To demonstrate the aggregate functions and set operations. ➤ To create and perform basic operations with MYSQL.
3.	22SCACAP2A	Applied Physics II	<ul style="list-style-type: none"> ➤ To understand the rapid growth of electronic technology. ➤ To know about semiconductors classification and their applications in various domains. ➤ To analyse the characteristics of transistor, transistor biasing circuits and oscillator circuits.
4.	22BNMEBB3	Business Ethics	<ul style="list-style-type: none"> ➤ To outline the significance of ethics in business. ➤ To know the culture of organization. ➤ To appreciate the best ethical practices in every actions of organization.
5.	22SCACAP1AP	Applied Physics I Lab	<ul style="list-style-type: none"> ➤ To gain the practical knowledge about electricity, magnetism and measurements such as resistance, voltage, current. ➤ To distinguish electronic components. ➤ To construct the learnt electronic circuits on their own.

Semester V

S.No	Course Code	Name of the Course	Course Outcomes
1.	22SCCCS5	Fundamentals of Algorithms	<ul style="list-style-type: none"> ➤ To know the basic concepts of algorithms. ➤ To comprehend greedy and optimality algorithms. ➤ To appreciate the backtracking concept and its different algorithms.
2.	22SCCCS6	Computer Networks	<ul style="list-style-type: none"> ➤ To recall the basic concepts of computer networks. ➤ To summarize the technical specifications of various layers of the OSI model in a computer network. ➤ To identify the appropriate protocols and standards for computer networks.
3.	22SCCCS7	Digital Electronics and Microprocessor	<ul style="list-style-type: none"> ➤ To understand about various number systems. ➤ To explain the Evolution of Microprocessors. ➤ To use the Instruction Set of Intel 8085 in simple programs.
4.	22SCCCS5P	Digital Electronics and Microprocessor Lab	<ul style="list-style-type: none"> ➤ To verify the logic gate and the working of Adder and subtractors. ➤ To construct and study the function of Shift registers.

			<ul style="list-style-type: none"> ➤ To write simple ALPs and execute them.
5.	22SMBECS1B	Computer Graphics	<ul style="list-style-type: none"> ➤ To understand the basics of Computer Graphics, Different Graphics Systems and Applications of Computer Graphics. ➤ To apply 2D Geometric Transformations. ➤ To use 3D Geometric and Modelling Transformations.
6.	22SSBECS1	Web Technology	<ul style="list-style-type: none"> ➤ To understand and apply the webpage concepts. ➤ To develop static and dynamic web pages. ➤ To understand the feature of JavaScript and VB Script.
7.	22UGSDC	Soft Skills Development	<ul style="list-style-type: none"> ➤ To communicate through verbal/oral communication and improve the listening skills ➤ To become more effective individual through goal/target setting, self-motivation and practicing creative thinking ➤ To perform effectively in multi-disciplinary and heterogeneous teams through the knowledge of team work, interpersonal relationships, conflict management and leadership quality.

Semester VI

S.No	Course Code	Name of the Course	Course Outcomes
1.	22SCCCS8	Operating Systems	<ul style="list-style-type: none"> ➤ To recall the basic principles and importance of the operating system in a computer. ➤ To analyse the issues and challenges of the operating system and security mechanisms. ➤ To evaluate the functions and features of file management in operating systems.
2.	22SCCCS9	Programming in PHP	<ul style="list-style-type: none"> ➤ To understand the fundamental knowledge of developing web applications with PHP. ➤ To design Web based applications. ➤ To develop AJAX based applications.
3.	22SCCCS6P	Programming in PHP Lab	<ul style="list-style-type: none"> ➤ To learn PHP programming on handling strings and arrays. ➤ To handle files, sessions and cookies by downloading a file from the server. ➤ To gain experience in drawing images using Ajax.
4.	22SMBECS2A	Software Engineering	<ul style="list-style-type: none"> ➤ To recall the various techniques of software process models. ➤ To develop frameworks for software projects. ➤ To apply the knowledge, techniques, and skills in the development of a software product.
5.	22SCSPW	Project	<ul style="list-style-type: none"> ➤ To undergo projects and gain knowledge in the relevant field of study.

6.	22SSBECS2	Mobile Application Development	<ul style="list-style-type: none"> ➤ To identify various concepts of mobile application programming in Android platform. ➤ To implement the business logic in an app with java. ➤ To understand Android User Interface Design with XML.
7.	22UGGS	Gender Studies	<ul style="list-style-type: none"> ➤ To make the students aware of feminine and masculine genders of strength and weakness. ➤ To develop sensitivity towards both genders in order to lead an ethically enriched life. ➤ To promote attitudinal change towards a gender balanced ambience, gender issues and women empowerment.

Programme: M.Sc. Computer Science

PO No.	Programme Outcomes upon Completion of M.Sc., Degree Programme, the Graduates will be able
PO1	To gain a respectable job in this area after completing the programme with good grades.
PO2	To demonstrate knowledge and skills of leadership, advocacy and agency as these apply to the degree field.
PO3	To develop knowledge, skills and dispositions of critical inquiry and reflective practice.
PO4	To acquire research-based knowledge, skills and dispositions associated with equity and diversity as these apply to effective practice in the content field.
PO5	To evaluate the various perspectives, policies and/or practices relevant to one's field of study.

Semester I

S. No	Course Code	Name of the Course	Course Outcomes
1.	P22CSCC11	Mathematical Foundation for Computer Science	<ul style="list-style-type: none"> ➤ To apply the basis of the Mathematical applications. ➤ To understand propositions, tautologies and inference rules. ➤ To formulate problems and apply testing of hypothesis.
2.	P22CSCC12	Problem Solving using Python and R	<ul style="list-style-type: none"> ➤ To write Python programs using Python data structures. ➤ To develop object oriented programs in Python. ➤ To manipulate files using Python.
3.	P22CSCC1B	Web Technologies	<ul style="list-style-type: none"> ➤ To design a web page with Web form fundamentals and web control classes. ➤ To recognize the importance of validation control, cookies and session. ➤ To recognize the difference between Data list and Data grid controls in accessing data.

4.	P22CSCC1P	Problem Solving using Python and R Lab	<ul style="list-style-type: none"> ➤ To practices the basic concepts of Python. ➤ To create and access the Dictionaries, Files and Exceptions. ➤ To write simple programs using R programming concepts.
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Semester II

S. No	Course Code	Name of the Course	Course Outcomes
1.	P22CSCC21	Advanced Database Management System	<ul style="list-style-type: none"> ➤ To revise the components, functions and various database. ➤ To design techniques used for modeling the databases management system. ➤ To examine the clauses and functions of SQL and write optimal queries in the above languages.
2.	P22CSCC22	Compiler Design	<ul style="list-style-type: none"> ➤ To understand the fundamentals of a compiler. ➤ To get knowledge about the context-free grammar and various parsing techniques. ➤ To understand the lexical analyzer and syntax analyzer of Compiler.
3.	P22CSCC2A	Distributed Technologies	<ul style="list-style-type: none"> ➤ To compare the architectures of distributed systems. ➤ To differentiate the technologies associated with presentation and interaction services. ➤ To understand the art of developing ASP.NET pages with web server and HTML controls.
4.	P22CSCC2P	Advanced Database Management System Lab	<ul style="list-style-type: none"> ➤ To design and implement a database schema for given problem. ➤ To apply the normalization techniques for development of application software to realistic problems. ➤ To formulate queries using SQL DML/DDDL/DCL commands.
5.	P22CSCC2AP	Distributed Technologies Lab	<ul style="list-style-type: none"> ➤ 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 analyse the current popular distributed systems such as peer-to-peer (P2P) systems will also be analysed.
6.	P22CSE2C	Green Computing	<ul style="list-style-type: none"> ➤ To understand Green IT fundamentals. ➤ To get knowledge about green assets and models. ➤ To understand Grid framework.

7.	P22FSNME1	Fitness Nutrition	<ul style="list-style-type: none"> ➤ To explain functional and nutritional assessment techniques among individual. ➤ To relate nutritional problems associated with sports person. ➤ To assess the dietary requirements for pre and post events.
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Semester III

S.No	Course Code	Name of the Course	Course Outcomes
1.	P22CSCC31	Big Data Analytics	<ul style="list-style-type: none"> ➤ To understand the unstructured databases. ➤ To analyze the Big Data framework like Hadoop and NOSQL to efficiently store and process Big Data to generate analytics. ➤ To reveal the Map Reduce technologies.
2.	P22CSCC32	Artificial Intelligence and Machine Learning	<ul style="list-style-type: none"> ➤ To recognize the characteristics of Machine Learning techniques that enable to solve real world problems. ➤ To recognize the characteristics of machine learning strategies. ➤ To apply various supervised learning methods to appropriate problems.
3.	P22CSCC3A	User Interface Design and Development	<ul style="list-style-type: none"> ➤ To work with XML technologies. ➤ To implement new technologies such as Angular JS and JQuery. ➤ To select and utilize design thinking processes and UX/UI tools.
4.	P22CSE3B	Block Chain Technology	<ul style="list-style-type: none"> ➤ To discuss and describe the history, types and applications of Block chain. ➤ To gain familiarity with Cryptography and Consensus algorithms. ➤ To create and deploy projects using Web3j, ICO and IPFS.
5.	P22FSNME2	Community Nutrition	<ul style="list-style-type: none"> ➤ To list ecological factors leading to malnutrition ➤ To explain nutritional problems of the community ➤ To asses nutritional status of the community
6.	P22CSCC3P	Machine Learning Lab	<ul style="list-style-type: none"> ➤ To acquire practical knowledge about Data Pre-processing and Feature Extraction. ➤ To practice to write program Linear Regression Models, K-Nearest Neighbours, K-Means Clustering. ➤ To learn practical skills about Classification and Support Vector Machine.

7.	P22CSCC3AP	User Interface Design and Development Lab	<ul style="list-style-type: none"> ➤ To learn about practical knowledge XML and CSS. ➤ To gain hands on knowledge about jQuery and Angular JS. ➤ To acquire knowledge about Ajax and PHP.
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Semester IV

S.No	Course Code	Name of the Course	Course Outcomes
1.	P22CSCC41	Agile Technologies	<ul style="list-style-type: none"> ➤ To realize the importance of interacting with business stakeholders in determining the requirements for a software system. ➤ To perform iterative software development processes: how to plan them, how to execute them. ➤ To develop techniques and tools for improving team collaboration and software quality.
2.	P22CSCC42	Cloud Computing	<ul style="list-style-type: none"> ➤ To understand the concept of virtualization and how this has enabled the development of Cloud Computing. ➤ To know the fundamentals of Cloud, Cloud Architectures and types of services in Cloud. ➤ To understand scaling, Cloud security and Disaster Management.
3.	P22CSIBC	Technology Innovation and Sustainable Enterprise	<ul style="list-style-type: none"> ➤ To identify entrepreneurial traits. ➤ To develop comprehensive business plans. ➤ To prepare plans to manage the enterprise effectively.
4.	P22CSVAC2	Foundations of IoT	<ul style="list-style-type: none"> ➤ To learn and understand the technology and current trends in Internet of things. ➤ To understand the various elements of IoT system and hardware devices. ➤ To learn the programming languages and platforms for building IOT applications.
5.	P22CSPW	Project Work	<ul style="list-style-type: none"> ➤ To undergo projects and gain knowledge in the relevant field of study.