

Bharathidasan College of Arts and Science, Erode
PG & Research Department of Computer Science
M.Sc (CS) – Programme Outcome and Course Outcome

Program Outcomes (PO)

- To enable the students, to understand the core concepts, visualize and to apply them in the real time scenarios.
- To impart the need for consistent learning, importance of research & development for the welfare of the society and to the nation at large.

Program Specific Outcomes (PSO)

- Master of Science (M.Sc) is a postgraduate degree course of two years duration.
- It imparts higher level knowledge and understanding of computer science and technology.
- To acquire deep knowledge in fundamental aspects of all core areas of computer science.
- The objective of this course is to mould students to acquire analytical, creative and problem solving skills to meet the industry standards and be well prepared for research activities.
- On successful completion of M.Sc. Computer Science course, one can find lucrative career opportunities in Software and Computer Hardware related industry.

Course Outcomes (CO)

Paper I: Analysis & Design of Algorithms

This course presents an introduction to the algorithms, its analysis and design and various methods like divide and conquer method, Dynamic programming, backtracking. It will enable the students to learn the elementary data Structures and algorithms. On successful completion of the course the students would have understood the various design and analysis of the efficient algorithms using various approaches for real world problems.

Paper II Object Oriented Analysis and Design & C++

This course presents the object model, classes, objects and its relationship, nature of the classes and introduction to C++. The goal is to enable the students to learn C++ and object models. On Successful completion of the course the students would have understood the concepts in object models and the basically the C++ language.

Paper III Advanced Networks

This course will give the student an introduction to Digital networks, Internet Address, Internet protocol, TCP and UDP. It will enable the students to learn the digital networks, Internet protocol and UDP diagrams. The objective is that the student would have gained in-depth knowledge of Internet protocols and their functionalities.

Paper IV Advanced Software Engineering

This course gives the introduction to software engineering, design, testing and maintenance. It enables the students to learn the concepts of software engineering and SPM. It will guide the student to plan a software engineering process to account for quality issues

and non-functional requirements. It also imparts knowledge to translate requirement specifications into a design, and then realize that design practically all using an appropriate software engineering methodology and will also provide basic knowledge about software project management.

Paper V Data Mining and Warehousing

This course presents the introduction to Mining tasks, classification, clustering and Data warehousing. This course enables the students to learn the data mining tasks & data warehousing techniques. On completion of the course the students would have understood the association rules, clustering techniques and data warehousing.

Paper VI Advanced Operating Systems

This course gives the introduction & evolution of operating systems, interprocess communication, distributed systems and Unix OS. The students would have learnt the basics of operating systems, distributed operating systems and Unix OS, the IPC problems and file caching schemes. They would have gained knowledge in Distributed OS and Unix OS.

Paper VI : ADVANCED OPERATING SYSTEMS

(Effective for the candidates admitted from the academic Year 2018-2019)

This course presents the principles and functions of various types of operating systems and enables the students to learn the different types of operating systems and their functioning. It helps the students to gain knowledge on distributed operating systems, to gain insight into the components and management aspects of real time and mobile operating systems.

Paper VII Internet and Java Programming

This course presents the introduction to Internet, Java, and Advanced Java. It enables the students to gain knowledge in Internet and Java. The student would understand all the features of Java.

Paper VII Advanced Java Programming (new syllabus)

This course presents the concepts of RMI, JDBC, Servlets, JQuery and JSP. The goal of this course is to enable the students to learn the basic functions, principles and concepts of advanced java programming. On successful completion the students would have acquired skill in advanced java programming.

Paper VIII Artificial Intelligence & Expert Systems

This course describes the introduction to AI Problems, heuristic techniques, and represents simple facts and learning. The goal is to enable the students to learn the concepts of AI and expert systems. On Successful completion of the course the students would have understood the AI & expert systems and learn the heuristic techniques and reasoning.

Elective – I Multimedia and its Applications

This course gives the brief introduction to multimedia, images & animation. It enables the students to learn the concepts of Multimedia. The course would help the students to understand about multimedia animation and desktop computing.

Elective – I PHP Programming (*Chosen from December 2018 onwards*)

This course gives the Introduction to PHP, PHP functions, database handling and AJAX. The goal of this course is to make the students to learn the fundamentals of open source software and get experience in PHP and AJAX. On Successful completion of the course the students would have understood the features like functions, forms in PHP, files handling, OOPs concepts, cookies, sessions and database, draw images on the server with AJAX. The student would have acquired skills to write PHP programs.

Paper IX Digital Image Processing

This course gives the introduction to digital image Processing, fundamentals, image enhancement and image restoration techniques. It enables the students to learn the fundamentals of digital image processing, image compression and segmentation.

Paper X Advanced Tools in Computing

This course presents the introduction of XML, Document type definition, Schemas, Document Object models, and ASP.net. It enables the students to learn the XML Technologies, applications and ASP.net programming. After course completion of the course the students would have gained knowledge in XML, DOM technologies and understood the basics of ASP.NET, and Programming in ASP.NET and Web forms.

Paper X Python Programming (new syllabus)

This course gives a brief introduction to Python, creation of web applications, network applications and working in the Clouds. It enables the students to gain knowledge in Python and develop web applications using Python. The objective of this course is to develop an understanding on the basic concepts of Python programming, file operations, classes and objects and also creates client server networking applications.

Paper XI Network Security and Cryptography

This course is designed to make the students learn the principles and practices of network security and cryptography by using case studies. It will enable the students to understand the various methods of encryption, authorization and implementation of cryptographic algorithms. It will help to identify and explain the concepts, protocols and technologies associated with a secure communication across the network and the Internet.

Paper XII Business Intelligence

This course presents the introduction to business intelligence, Big Data, Hadoop and various applications of Big Data along with case studies. This course enables the students to learn the concepts of Big Data. The objective of this course is to make the student understand the process of implementing the Big Data in real world.

Elective – II Web Services

This course presents an overview of distributed computing, XML, web services. The goal is to enable the student to be familiar with distributed services, XML and web services. The objective is to make the student understand the concepts of web services.