

# COURSE OUTCOME

## COMPUTER SCIENCE

### Title of the Course : *Problem Solving in C*

CO-1	Understand the evolution and functionality of a Digital Computer.
CO-2	Apply logical skills to analyse a given problem
CO-3	Develop an algorithm for solving a given problem.
CO-4	Understand 'C' language constructs like Iterative statements, Array processing, Pointers, etc.
CO-5	Apply 'C' language constructs to the algorithms to write a 'C' language program.

### Title of the Course : *Data Structures using C*

CO-1	Understand available Data Structures for data storage and processing.
CO-2	Comprehend Data Structure and their real-time applications - Stack, Queue, Linked List, Trees and Graph
CO-3	Choose a suitable Data Structures for an application
CO-4	Develop ability to implement different Sorting and Search methods

CO-5	Design and develop programs using various data structures
<b>Title of the Course :<i>Database Management System</i></b>	
CO-1	Understand the fundamental concepts of DBMS with special emphasis on relational data model.
CO-2	Understand the fundamental concepts of DBMS with special emphasis on relational data model.
CO-3	Model data base using ER Diagrams and design database schemas based on the model.
CO-4	Create a small database using SQL and Store, Retrieve data from database.
<b>Title of the Course : <i>Object Oriented Programming with JAVA</i></b>	
CO-1	Understand different computer programming paradigms
CO-2	Understand underlying principles of Object-Oriented Programming in Java
CO-3	Develop problem-solving and programming skills using OOP concepts
CO-4	Develop the ability to solve real-world problems through software development in high-level programming language like Java
<b>Title of the Course : <i>Operating System</i></b>	
CO-1	Understand Operating System Architectural design and its services.
CO-2	Understand various process management concepts including scheduling, synchronization, and deadlocks.
CO-3	Comprehend different approaches for memory management.

CO-4	Specify objectives of modern operating systems and describe how operating systems have evolved over time.
<b>Title of the Course : <i>Problem Solving in C</i></b>	
CO-1	Understand the evolution and functionality of a Digital Computer.
CO-2	Apply logical skills to analyse a given problem
CO-3	Develop an algorithm for solving a given problem.
CO-4	Understand 'C' language constructs like Iterative statements, Array processing, Pointers, etc.
CO-5	Apply 'C' language constructs to the algorithms to write a 'C' language program.
<b>Title of the Course : <i>Computer Fundamentals and Photoshop</i></b>	
CO-1	To explore basic knowledge on computers and Photoshop's beauty from the practical to the painterly artistic and to understand how Photoshop will help you create your own successful images
<b>Title of the Course : <i>Object Oriented Programming Using Java</i></b>	
CO-1	Understand the concept and underlying principles of Object-Oriented Programming
CO-2	Develop problem-solving and programming skills using OOP concepts
CO-3	Develop the ability to solve real-world problems through software development in high-level programming language like Java
CO-4	Understand how object-oriented concepts are incorporated into the Java programming language

CO-5	Develop efficient Java applets and applications using OOP concept
<b>Title of the Course : <i>Data Structures using C</i></b>	
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CO-2	Comprehend Data Structure and their real-time applications - Stack, Queue, Linked List, Trees and Graph
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CO-4	Create a small database using SQL and Store, Retrieve data from database.
<b>Title of the Course : <i>Software Engineering</i></b>	
CO-1	Ability to gather and specify requirements of the software projects
CO-2	Ability to analyze software requirements with existing tools

CO-3	Able to understand and apply the basic project management practices in real life projects
CO-4	Ability to work in a team as well as independently on software projects
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CO-2	Understand various process management concepts including scheduling, synchronization, and deadlocks.
CO-3	Comprehend different approaches for memory management.
CO-4	Specify objectives of modern operating systems and describe how operating systems have evolved over time.
<b>Title of the Course : <i>Computer Networks</i></b>	
CO-1	Identify the different components in a Communication System and their respective roles
CO-2	Describe the technical issues related to the local Area Networks
CO-3	Identify the common technologies available in establishing LAN infrastructure
<b>Title of the Course : <i>Web Technologies</i></b>	
CO-1	To design interactive web pages using HTML and Style sheets
CO-2	To practice latest web technologies and tools by conducting experiments
CO-3	To understand the web architecture and web services.

CO-4	To study the framework and building blocks of .NET Integrated Development Environment.
<b>Title of the Course : <i>Foundations of Data Science</i></b>	
CO-1	Able to apply fundamental algorithmic ideas to process data
CO-2	Learn to apply hypotheses and data into actionable predictions.
CO-3	Document and transfer the results and effectively communicate the findings using visualization techniques.
<b>Title of the Course : <i>Big Data Technology</i></b>	
CO-1	Acquire knowledge of storing and maintaining data in cluster, reading data from and writing data to Hadoop cluster
CO-2	Acquire knowledge of HDFS components , Name node, Data node, etc
CO-3	Able to write Map Reduce applications to access data present on HDFS
CO-4	Able to develop Map Reduce applications to analyze Big Data related to the real world use cases
<b>Title of the Course : <i>Computing For Data Analytics</i></b>	
CO-1	Learn the Big Data in Technology Perspective
CO-2	Understanding of the statistical procedures most often used by practicing engineers
CO-3	Understand Forecasting methods and apply for business applications.

**Title of the Course : *Distributed Systems***

CO-1	Create models for distributed systems
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CO-2	Apply different techniques learned in the distributed system.
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**Title of the Course : *Cloud Computing***

CO-1	Identify the architecture, infrastructure and delivery models of cloud computing
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CO-2	Choose the appropriate cloud player , Programming Models and approach.
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CO-3	Address the core issues of cloud computing such as security, privacy and interoperability
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CO-4	Design Cloud Services and Set a private cloud
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**Title of the Course : *Grid Computing***

CO-1	Compare the strengths and limitations of Grid computing
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CO-2	Identify the architecture, infrastructure and delivery models of Grid computing
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CO-3	Apply suitable virtualization concept.
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CO-4	Address the core issues of Grid computing such as security, privacy and interoperability
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## DATA SCIENCE

### Title of the Course : *Introduction to Data Science with R*

CO-1	Understand the processes of data science - identifying the problem to be solved, data collection, preparation, modeling, evaluation and visualization.
CO-2	Able to understand and use - lists, vectors, matrices, dataframes, implement Linear Regression etc
CO-3	Able to use basic R data structures in loading, cleaning the data and pre processing the data
CO-4	Develop and appreciate various techniques for data modeling and mining
CO-5	Be comfortable using commercial and open source tools such as the R language and its associated libraries for data analytics and visualization.

### Title of the Course : *Big Data Technology*

CO-1	Acquire knowledge of storing and maintaining data in cluster, reading data from and writing data to Hadoop cluster
CO-2	Acquire knowledge of HDFS components , Namenode, Datanode, etc
CO-3	Able to develop MapReduce applications to analyze Big Data related to the real world use cases
CO-4	Acquire knowledge of storing and maintaining data in cluster, reading data from and writing data to Hadoop cluster

### Title of the Course : *Data Mining and Data Analysis*

CO-1	To Analyze the data using statistical methods
CO-2	Compare various conceptions of data mining as evidenced in both research and application
CO-3	Evaluate mathematical methods underlying the effective application of data mining.
CO-4	Characterize various kinds of patterns that can be discovered by Association rule mining.