BLDE Association's

S.B. Arts and K.C.P. Science College, Vijayapur

Department of BSc Computer Science 2022-23

Programme Outcome (POs)

PO1	Provide students with fundamental knowledge and ability to expertise in Computer Science.
PO2	Provide insight to problem solving to succeed in Technical Profession through precise education and to prepare students to excel in postgraduate programs.
PO3	To inculcate in students professional, effective communication skills, team work, multidisciplinary approach and an ability to relate issues to broader social context.
PO4	Prepare students to be aware of excellence, leadership, written ethical codes and guidelines and lifelong learning needed for successful professional career by providing them with an excellent academic environment.
PO5	Empower the students in academic, social, psychological and economic arenas by developing relevant competencies.
PO6	Interpret and apply the implications of environment awareness initiatives incorporated in curriculum.
PO7	Participation and contribution to community development activities through NCC, NSS etc.
PO8	Acquire sufficient knowledge base in the Domain Specific area leading to the pursuit of advanced level of study in the chosen Domain Specific area.
PO9	Adaptability and capacity building to the ever changing needs of the industry and employment opportunities.
PO10	Inculcate the human values through curricular, co-curricular and extracurricular activities.

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PROGRAMME SPECIFIC OUTCOMES (PSOs)

PSO1	Ability to apply foundations of Mathematics, Principles of Physics/Statistics and Theory of Computer Science in solving the real-world problems.
	Identify, formulate, review research literature, and analyzes complex problems reaching substantiated conclusions using first principles of mathematics and Computer science.
PSO3	Design solutions for complex problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
PSO4	Create, select, and apply appropriate techniques, resources, and modern IT tools including prediction and modelling to complex activities with an understanding of the limitations.
PSO5	Understand the impact of the professional solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
PSO6	Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
PSO7	Recognize the need for, and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change.

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Semester	I SEM
Course Code	21BSC1C1CS1L
Course Title	Computer Fundamentals and Programming in C

Course Outcomes (COs)

Upon completion of this course, the student will be able to		PO	PSO
CO1	Confidently operate Desktop Computers to carry out computational tasks.	1,2	1,2,4
CO2	Understand working of Hardware and Software and the importance of operating systems.	1,2	2,4
CO3	Understand programming languages, number systems, peripheral devices, networking, multimedia and internet concepts.	1,2,4	2,3,4
CO4	Read, understand and trace the execution of programs written in C language.	2,4	2,3,4
CO5	Write the C code for a given problem.	2,4	2,3
CO6	Perform input and output operations using programs in C.	2,4	2,3
CO7	Write programs that perform operations on arrays.	2,4	2,3

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Semester	I SEM
Course Code	21BSC1C1CS1L
Course Title	Computer Fundamentals and Programming in C

Mapping of CO, POs and PSO on Theory

COs/POs and PSOs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7
CO1	3	3	-	-	-	-	-	-	-	-	2	3	-	3	-	-	-
CO2	3	3	-	-	-	-	-	-	-	-	-	3	-	2	-	-	-
CO3	3	3	-	2	-	-	-	-	-	-	-	2	3	3	-	-	-
CO4	-	2	-	3	-	-	-	-	-	-	-	3	2	2	-	-	-
CO5	-	3	-	3	-	-	-	-	-	-	-	3	3	-	-	-	-
CO6	-	2	-	3	-	-	-	-	-	-	-	2	3	-	-	-	-
CO7	-	3	-	3	-	-	-	-	-	-	-	3	3	-	-	-	-

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Semester	**II SEM**
Course Code	21BSC2C2CS2L
Course Title	Data Structures using C

Course Outcomes (COs)

	Upon completion of this course, the student will be able to	PO	PSO
CO1	Describe how arrays, records, linked structures, stacks, queues, trees, and graphs are represented in memory and used by algorithms.	1,2	1,2,3,4
CO2	Describe common applications for arrays, records, linked structures, stacks, queues, trees, and graphs.	1,2	2,3,4
CO3	Write programs that use arrays, records, linked structures, stacks, queues, trees, and graphs.	1,2,4	2,3,4
CO4	Demonstrate different methods for traversing trees.	2,4	2,3,4
CO5	Compare alternative implementations of data structures with respect to performance.	2,4	2,3
CO6	Describe the concept of recursion, give examples of its use.	2,4	2,3
CO7	Discuss the computational efficiency of the principal algorithms for sorting and searching.	2,4	2,3

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Semester	II SEM
Course Code	21BSC2C2CS2L
Course Title	Data Structures using C

Mapping of CO, POs and PSO on Theory

CO/PO/PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7
CO1	3	3	-	-	-	-	-	-	-	-	3	2	3	3	-	-	-
CO2	3	3	-	-	-	-	-	-	-	-	-	3	3	3	-	-	-
CO3	3	3	-	2	-	-	-	-	-	-	-	2	3	3	-	-	-
CO4	-	2	-	3	-	-	-	-	-	-	-	3	2	3	-	-	-
CO5	-	3	-	3	-	-	-	-	-	-	-	3	3	-	-	-	-
CO6	-	2	-	3	-	-	-	-	-	-	-	2	3	-	-	-	-
CO7	-	3	-	3	-	-	-	-	-	-	-	3	3	-	-	-	-

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Semester	**III SEM**
Course Code	21BSC3C3CS1L
Course Title	Object Oriented Programming Conce pts and Programming in Java

Course Outcomes (COs)

Upon completion of this course, the student will be able to		PO	PSO
CO1	Explain the object-oriented concepts and JAVA.	1,2	1,2,3,4
CO2	Write JAVA programs using OOP concepts like Abstraction, Encapsulation, Inheritance and Polymorphism.	1,2	2,3,4
CO3	Implement Classes and multi-threading using JAVA.	1,2,4	2,3,4
CO4	Demonstrate the basic principles of creating Java applications with GUI.	2,4	2,3,4

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Semester	**III SEM**
Course Code	21BSC3C3CS1L
Course Title	Object Oriented Programming Conce pts and Programming in Java

Mapping of CO, POs and PSO on Theory

COs/POs and PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7
CO1	3	3	-	-	-	-	-	-	-	-	3	3	2	3	-	-	-
CO2	3	3	-	-	-	-	-	-	-	-	-	3	3	3	-	-	-
CO3	3	3	-	2	-	-	-	-	-	-	-	2	3	3	-	-	-
CO4	-	3	-	3	-	-	-	-	-	-	-	3	2	3	-	-	-
CO5	-	3	-	3	-	-	-	-	-	-	-	3	3	-	-	-	-

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Semester	**IV SEM**
Course Code	21BSC4C2CS2L
Course Title	Database Management System

Course Outcomes (COs)

On completion of this course, the student will be able to		PO	PSO
CO1	Explain the various data base concepts and the need for data base systems.	1,2	1,2,3,4
CO2	Identify and define data base objects, enforce integrity constraints on a data base using DBMS.	1,2	2,3,4
CO3	Demonstrate a Data model and Schemas in RDBMS	1,2,4	2,3,4
CO4	Identify entities and relationships and draw ER diagram for a given real-world problem.	2,4	2,3,4
CO5	Convert an ER diagram to a data base schema and deduce it to the desired normal form.	2,4	2,3
CO6	Formulate queries in Relational Algebra, Structured Query Language (SQL) for data base manipulation.	1,2,3	2,3,4
CO7	Explain the transaction processing and concurrency control techniques.	1,2	1,2,3

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Semester	**IV SEM**
Course Code	21BSC4C2CS2L
Course Title	Database Management System

Mapping of CO, POs and PSO on Theory

COs/POs and PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7
CO1	3	3	-	-	-	-	-	-	-	-	3	3	3	3	-	-	-
CO2	3	3	-	-	-	-	-	-	-	-	-	3	3	2	-	-	-
CO3	3	3	-	3	-	-	-	-	-	-	-	3	3	3	-	-	-
CO4	-	2	-	2	-	-	-	-	-	-	-	2	3	3	-	-	-
CO5	-	3	-	3	-	-	-	-	-	-	-	3	3	-	-	-	-
CO6	3	2	3		-	-	-	-	-	-	-	2	3	2	-	-	-
CO7	3	3	-	-	-	-	-	-	-	-	3	3	3	2	-	-	-

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Semester	V SEM _Paper_1
Course Code	17BScCSCT51
Course Title	Relational Database Management System

Course Outcomes (COs)

	Upon completion of this course, the student will be able to	PO	PSO
CO1	Explain the features of database management systems and Relational database.	1,2	1,2,3
CO2	Design conceptual models of a database using ER modeling for real life applications and also construct queries in Relational Algebra.	1,2	1,2,3,4
CO3	Create and populate a RDBMS for a real life application, with constraints and keys, using SQL. Retrieve any type of information from a data base by formulating complex queries in SQL.	1,2,4	2,3,4
CO4	Analyze the existing design of a database schema and apply concepts of normalization to design an optimal database.	2,4	2,3,4
CO5	Build indexing mechanisms for efficient retrieval of information from a database	2,4	2,3,4
CO6	Explain and apply different concurrency control, Backup and recovery techniques	1,2,3	2,3,4

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Semester	V SEM _Paper_1
Course Code	17BScCSCT51
Course Title	Relational Database Management System

Mapping of CO, POs and PSO on Theory

CoS\POs and PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7
CO1	3	3	-	-	-	-	-	-	-	-	3	2	3	-	-	-	-
CO2	3	3	-	-	-	-	-	-	-	-	3	3	3	3	-	-	-
CO3	3	3	-	3	-	-	-	-	-	-	-	3	3	3	-	-	-
CO4	-	3	-	3	-	-	-	-	-	-	-	3	3	3	-	-	-
CO5	-	2	-	3	-	-	-	-	-	-	-	3	3	3	-	-	-
CO6	3	3	-	3	-	-	-	-	-	-	-	3	3	3	-	-	-

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Semester	V SEM _Paper_2
Course Code	17BScCSCT53
Course Title	Object Oriented Programming using Java

Course Outcomes (COs)

On completion of this course, the student will be able to		PO	PSO
CO1	Describe the fundamental concepts and features of Java Programming language	1,2	1,2
CO2	Implement Object Oriented Programming Concepts (class, constructor, overloading, inheritance, overriding) in java	1,2	1,2,4
CO3	Implement concepts of Multithreading and Exception Handling in Java.	1,2,4	2,3,4
CO4	Create and Use Packages and Interfaces in a Java program and Develop Graphical User Interface applications and Web based applications in Java by importing applet, AWT	2,4	2,3,4

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Semester	V SEM _Paper_2
Course Code	17BScCSCT53
Course Title	Object Oriented Programming using Java

Mapping of CO, POs and PSO on Theory

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7
CO1	3	3	-	-	-	-	-	-	-	-	3	2	-	-	-	-	-
CO2	3	3	-	-	-	-	-	-	-	-	3	3	-	3	-	-	-
CO3	3	3	-	3	-	-	-	-	-	-	-	3	3	3	-	-	-
CO4	-	3	-	3	-	-	-	-	-	-	-	3	3	3	-	-	-

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Semester	**VI SEM _Paper_1**
Course Code	CPSDSET6.1
Course Title	Web Programming

Course Outcomes (COs)

	Upon completion of this course, the student will be able to	PO	PSO
CO1	Understand the web applications and web technologies terminology.	1,2	1,2
CO2	Develop applications using latest web technologies.	2,4	1,2,4
CO3	Designing interactive web pages using HTML and Style sheets.	2,3,4	2,3,4
CO4	Understand XML and its application in web based applications.	2,4	2,3,4,5

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Semester	**VI SEM _Paper_1**
Course Code	CPSDSET6.1
Course Title	Web Programming

Mapping of CO, POs and PSO on Theory

COs\POs and PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7
CO1	3	3	-	-	-	-	-	-	-	-	3	3	-	-	-	-	-
CO2	-	3	-	3	-	-	-	-	-	-	3	3	-	3	-	-	-
CO3	-	3	3	3	-	-	-	-	-	-	-	3	3	3	-	-	-
CO4	-	3	-	3	-	-	-	-	-	-	-	3	3	2	3	-	-

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Semester	**VI SEM _Paper_2**
Course Code	CPSDSET6.2A
Course Title	Elective-111 Python

Course Outcomes (COs)

Upon completion of this course, the student will be able to		PO	PSO
CO1	Acquire programming skills in core Python.	1,2	1,2
CO2	Acquire Object-oriented programming skills in Python.	1,2	1,2,4
CO3	Develop the skill of designing graphical-user interfaces (GUI) in Python.	1,2,4	2,3,4
CO4	Develop the ability to write database application in python	2,4	2,3,4

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Semester	**VI SEM _Paper_2**
Course Code	CPSDSET6.2A
Course Title	Elective-111 Python

Mapping of CO, POs and PSO on Theory

COs\POs and PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7
CO1	3	3	-	-	-	-	-	-	-	-	3	3	-	-	-	-	-
CO2	3	3	-	-	-	-	-	-	-	-	3	3	-	2	-	-	-
CO3	3	3	-	2	-	-	-	-	-	-	-	2	3	3	-	-	-
CO4	-	3	-	3	-	-	-	-	-	-	-	3	3	3	-	-	-
CO5	-	3	-	3	-	-	-	-	-	-	-	3	3	2	2	-	-

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