

GEMS ARTS AND SCIENCE COLLEGE, RAMAPURAM

DEPARTMENT OF COMPUTER SCIENCE

**PROGRAMME OUTCOMES (POs), PROGRAMME SPECIFIC
OUTCOMES (PSOs), and COURSE OUTCOMES (COs)**

PROGRAMME: BSc. COMPUTER SCIENCE

PROGRAMME OUTCOMES (POS)

PO1 To open a channel of admission for computing courses for students, who have done the 10+2 and are interested in taking computing/IT as a career.

PO2 After acquiring the Bachelor's Degree (B.Sc. Computer Science) at University of Calicut, there is further educational opportunity to go for an MCA or other Master's Programme like MSc (Computer Science), MSc (IT), MBA, etc., at this university or at any other University/Institute.

PO3 Also after completing the B.Sc. Computer Science Programme, a student should be able to get entry level job in the field of Information Technology or ITES or they can take up self-employment in Indian & global software market.

PO4 To get an awareness of the impact of science on the environment and society.

PROGRAMME SPECIFIC OUTCOMES (PSOS)

PSO1 To attract young minds to the potentially rich and employable field of computer applications.

PSO2 To be a foundation graduate Programme this will act as a feeder course for higher studies in the area of Computer Science/Applications.

PSO3 To develop skills in software development so as to enable the B.Sc Computer Science graduates to take up self-employment in Indian and global software market.

PSO4 To train and equip the students to meet the requirements of the Software industry in the country and outside.

COURSE OUTCOMES (COs)**SEMESTER I**

| COURSE CODE | PAPER NAME | CRE DITS | COURSE OUTCOME |
|--------------------|--------------------------------------|-----------------|--|
| BCS1B01 | COMPUTER FUNDAMENTALS AND HTML | 3 | CO1- To equip the students with fundamentals of Computer. |
| | | | CO2- To learn the basics of Computer organization. |
| | | | CO3- To equip the students to write algorithm and draw flow chart for solving simple problems |
| | | | CO4- To learn the basics of Internet and webpage design |

SEMESTER II

| COURSE CODE | PAPER NAME | CRE DITS | COURSE OUTCOME |
|--------------------|--|-----------------|--|
| BCS2B02 | PROBLEM SOLVING USING C | 3 | CO1- To equip the students with fundamental principles of Problem Solving aspects. |
| | | | CO2- To learn the concept of programming |
| | | | CO3- To study C language |
| | | | CO4- To equip the students to write programs for solving simple computing problems |
| BCS2B03 | PROGRAMMING LABORATORY I: HTML AND PROGRAMMING IN C | 4 | CO1- To make the students learn web designing |
| | | | CO2- To make the students learn programming environments. |
| | | | CO3- To practice procedural programming concepts. |
| | | | CO4- To make the students equipped to solve mathematical or scientific problems using C |

SEMESTER III

| COURSE CODE | PAPER NAME | CRE DITS | COURSE OUTCOME |
|--------------------|-------------------------|-----------------|---|
| A11 | PYTHON PROGRAMMING | 4 | CO1 -Understand various statements, data types and functions in Python |
| | | | CO2 - Develop programs in Python programming language |
| | | | CO3 - Understand the basics of Object oriented programming using Python |
| A12 | SENSORS AND TRANSDUCERS | 4 | CO1 - Explain resistance, inductance and capacitance transducers. |
| | | | CO2 - Perceive the concepts of temperature transducers. |
| | | | CO3 - Perceive the concepts level transducers and pressure |
| | | | CO4 - Explain flow transducers, electromagnetic transducers, radiation sensors and sound transducers |
| BCS3B04 | DATA STRUCTURES USING C | 3 | CO1 -To introduce the concept of data structures |
| | | | CO2 -To make the students aware of various data structures |
| | | | CO3 -To equip the students implement fundamental data structures |

SEMESTER IV

| COURSE CODE | PAPER NAME | CRE DITS | COURSE OUTCOME |
|--------------------|---|-----------------|---|
| A13 | DATA COMMUNICATION AND OPTICAL FIBERS | 4 | CO1 -To expose the students to the basics of network communication and signal propagation through optical fibers |
| A14 | MICROPROCESSORS- ARCHITECTURE AND PROGRAMMING | 4 | CO1 -To understand internals of Microprocessor. |
| | | | CO2 - To learn architecture of 8085 Microprocessor |
| | | | CO3 - To learn instruction set of 8085 Microprocessor |

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| | | | CO4- To learn how to program a Microprocessor |
| BCS4B05 | DATABASE MANAGEMENT SYSTEM AND RDBMS | 3 | CO1- To learn the basic principles of database and database design |
| | | | CO2- To learn the basics of RDBMS |
| | | | CO3- To learn the concepts of database manipulation SQL |
| | | | CO4- To study PL/SQL language |
| BCS4B06 | PROGRAMMING LABORATORY II: DATA STRUCTURES AND RDBMS | 4 | CO1- To make the students equipped to solve mathematical or scientific problems using C |
| | | | CO2- To learn how to implement various data structures. |
| | | | CO3- To provide opportunity to students to use data structures to solve real life problems. |

SEMESTER V

| COURSE CODE | PAPER NAME | CRE DITS | COURSE OUTCOME |
|--------------------|--|-----------------|---|
| BCS5B07 | COMPUTER ORGANIZATION AND ARCHITECTURE | 3 | CO1- To learn logic gates, combinational circuits and sequential circuits |
| | | | CO2- To learn basics of computer organization and architecture |
| BCS5B08 | JAVA PROGRAMMING | 3 | CO1- To review on concept of OOP. |
| | | | CO2- To learn Java Programming Environments. |
| | | | CO3- To practice programming in Java. |
| | | | CO4- To learn GUI Application development in JAVA. |
| BCS5B09 | WEB PROGRAMMING USING PHP | 3 | CO1- To familiar with the concept HTML,CSS,Javascript, Server Side Scripting |
| | | | CO2- To learn PHP Programming Environments |
| | | | CO3- To practice programming in PHP |
| | | | CO4- To learn Application development in PHP.with Database and AJAX |
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| BCS5B10 | PRINCIPLES OF SOFTWARE ENGINEERING | 3 | CO1- To learn engineering practices in Software development. |
| | | | CO2- To learn various software development methodologies and practices |
| | | | CO3- To learn and study various Evaluation |

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| | | | methods in Software Development. |
| BCS5D04 (Open Course) | INTRODUCTION TO DATA ANALYSIS USING SPREAD SHEET | 3 | CO1 -To introduce the importance of software tools. CO2 -To learn the Analysis using Spread sheets |

SEMESTER VI

| COURSE CODE | PAPER NAME | CRE DITS | COURSE OUTCOME |
|--------------------|--|-----------------|--|
| BCS6B11 | ANDROID PROGRAMMING | 3 | CO1 -To have a review on concept of Android programming. |
| | | | CO2 -To learn Android Programming Environments |
| | | | CO3 -To practice programming in Android |
| | | | CO4 -To learn GUI Application development in Android platform with XML |
| BCS6B12 | OPERATING SYSTEMS | 3 | CO1 -To learn objectives & functions of Operating Systems |
| | | | CO2 -To understand processes and its life cycle. |
| | | | CO3 -To learn and understand various Memory and Scheduling Algorithms |
| | | | CO4 -To have an overall idea about the latest developments in Operating Systems |
| BCS6B13 | COMPUTER NETWORKS | 3 | CO1 -To learn about transmissions in Computer Networks |
| | | | CO2 -To learn various Protocols used in Communication |
| | | | CO3 -To have a general idea on Network Administration |
| BCS6B14 | PROGRAMMING LABORATORY III: JAVA AND PHP PROGRAMMING | 3 | CO1 -To practice Java programming |
| | | | CO2 -To practice client side and server side scripting |
| | | | CO3 -practice PHP Programming. |
| | | | CO4 -To practice how to interact with databases through PHP |
| | | | CO5 -To practice developing dynamic websites |

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| BCS6B15 | PROGRAMMING LABORATORY IV: ANDROID AND LINUX SHELL PROGRAMMING | 3 | CO1-To practice Android programming |
| | | | CO2-To practice user interface applications |
| | | | CO3-To develop mobile application |
| | | | CO4-To practice shell programming |
| BCS6B17 | INDUSTRIAL VISIT AND PROJECT WORK | 2 | CO1-To provide practical knowledge on software development process |
| BCS6B16a | SYSTEM SOFTWARE | 3 | CO1-To build fundamental knowledge in system software |
| | | | CO2-To learn functions of various system software. |
| | | | CO3-To learn specifically learn compilation process of a program. |
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PROGRAMME: BSc. COMPUTER SCIENCE (Complementary Papers)

COURSE OUTCOMES (COs)

SEMESTER I

| COURSE CODE | PAPER NAME | CRE DITS | COURSE OUTCOME |
|--------------------|-----------------------|-----------------|--|
| CSC1C01 | COMPUTER FUNDAMENTALS | 2 | CO1- To learn the basics of computer hardware units and how they work together |
| | | | CO2- To acquire basic skill with office packages . |

SEMESTER II

| COURSE CODE | PAPER NAME | CRE DITS | COURSE OUTCOME |
|--------------------|--|-----------------|--|
| CSC2C02 | FUNDAMENTALS OF SYSTEM SOFTWARE, NETWORKS AND DBMS | 2 | CO1-To learn the basic concepts of various system software |
| | | | CO2- To learn the basics of Computer Networks |
| | | | CO3- To learn the basics of Databases |

SEMESTER III

| COURSE CODE | PAPER NAME | CRE DITS | COURSE OUTCOME |
|--------------------|-------------------------|-----------------|---|
| CSC3C03 | PROBLEM SOLVING USING C | 2 | CO1- To learn the concepts of programming |
| | | | CO2- To learn the C language |

SEMESTER IV

| COURSE CODE | PAPER NAME | CRE DITS | COURSE OUTCOME |
|--------------------|---------------------------------------|-----------------|---|
| CSC4C04 | DATA STRUCTURE USING C | 2 | CO1-To introduce the concept of data structures |
| | | | CO2- To make the students aware of various data structures |
| | | | CO3- To equip the students implement fundamental datastructures |
| CSC4C05 | PROGRAMMING LAB: C AND DATA STRUCTURE | 4 | CO1 To develop C Programming skills |
| | | | CO2- To make the students equipped to solve mathematical or scientific problems using C |
| | | | CO3- To learn how to implement various data structures |