BACHELOR OF COMPUTER SCIENCE

COURSE OUTCOMES 2019

SEMESTER I

BCS1B01 – Computer Fundamentals and HTML
Contact Hours per Week: 3 (1T + 2L)

Number of Credits: 3
Number of Contact Hours: 48 Hrs.
Course Evaluation: Internal – 15 Marks + External – 60 Marks

COs	COURSE OUTCOMES
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

BCS2B02 – Problem Solving Using C

Contact Hours per Week: 3(1T+2L)

Number of Credits: 3
Number of Contact Hours: 48Hrs.
Course Evaluation: Internal – 15 Marks + External – 60 Marks

COs	COURSE OUTCOMES
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: Lab Exam of 1st & 2nd
Semester - HTML and Programming in C

Number of
Credits: 4

Course Evaluation: Internal – 20 Marks + External – 80 Marks

COs	COURSE OUTCOMES
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

A11 - Python Programming

**Contact Hours
per Week: 4**
Number of
Credits: 4
**Number of
Contact Hours:
64**

Course Evaluation: Internal – 20 Marks + External – 80 Marks

COs	COURSE OUTCOMES
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
CO4	To learn basics of Python programming
CO5	To learn decision making, looping and functions in Python
CO6	Understand Object Oriented Programming using Python

A12 - Sensors and Transducers

**Contact Hours
per Week: 4T**
Number of
Credits: 4

Number of Contact Hours: 64 Hrs.

Course Evaluation: Internal – 20 Marks + External – 80 Marks

COs	COURSE OUTCOMES
CO1	Explain resistance, inductance and capacitance transducers.
CO2	Perceive the concepts of temperature and pressure transducers.

CO3	Perceive the concepts level transducers such as and flow transducers
CO4	Explain Electromagnetic transducers and radiation sensors
CO5	Explain force and torque transducers and sound transducers

BCS3B04 – Data Structures Using C

Contact Hours per Week: 7 (3T + 4L)
Number of Credits: **3**
Number of Contact Hours: 112 Hrs.
Course Evaluation: Internal – 15 Marks + External – 60 Marks

COs	COURSE OUTCOMES
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
CO4	Basic knowledge of computers, data structures and programming

SEMESTER IV

A13 - Microprocessors Architecture and Programming
Contact Hours per Week: 4T Number of Credits: 4
Number of Contact Hours: 64 Hrs.
Course Evaluation: Internal – 20 Marks + External – 80 Marks

COs	COURSE OUTCOMES
CO1	To understand internals of Microprocessor.
CO2	To learn architecture of 8085 Microprocessor
CO3	To learn instruction set of 8085 Microprocessor
CO4	To learn how to program a Microprocessor

A14 – Data Communication and Optical Fibres
**Contact Hours per
Week: 4T**
Number of
Credits: **4**

Number of Contact Hours: **64** hrs

Course Evaluation: Internal – 20 Marks + External – 80 Marks

COs	COURSE OUTCOMES
CO1	To introduce the concept of data communication
CO2	Understand various types of communication and communication medium
CO3	To equip the students implement communication

BCS4B05 – Database Management System and RDBMS

Contact Hours per Week: 7 (3T + 4L)

Number of Credits: 3

Number of Contact Hours: 112 Hrs.

Course Evaluation: Internal – 15 Marks + External – 60 Marks

COs	COURSE OUTCOMES
CO1	To learn the basics of RDBMS
CO2	To learn the concepts of database manipulation SQL
CO3	To study PL/SQL language
CO4	Basic knowledge of computers, data structures and programming
CO5	To learn the basic principles of database and database design

BCS4B06- Programming Laboratory II: Lab Exam of 3rd and 4th Semester - Data Structures and RDBMS

Number of Credits: 4

Course Evaluation: Internal – 20 Marks + External – 80 Marks

COs	COURSE OUTCOMES
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.
CO4	Knowledge in operating computer.

CO5	Theoretical knowledge in Data structures.
CO6	Knowledge in Database

SEMESTER V

BCS5B07 - Computer Organization and Architecture

Contact Hours per Week: 4 Number of Credits: 3

Number of Contact Hours: 64 Hrs.

Course Evaluation: Internal – 15 Marks + External – 60 Marks

COs	COURSE OUTCOMES
CO1	To learn logic gates, combinational circuits and sequential circuits
CO2	To learn basics of computer organization and architecture
CO3	Learns to analyse and develop a digital logic and apply it to solve real life problems.
CO4	Understands the theory and architecture of central processing unit and learners to analyse the design issues in terms of speed, technology, cost and performance.

BCS5B08 - Java Programming

Contact Hours per Week: 6 (3T + 3L)

Number of Credits: 3
Number of Contact Hours: 96 Hrs.
Course Evaluation: Internal: 15 Marks + External: 60 Marks

COs	COURSE OUTCOMES
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

Contact Hours per Week: 6 (3T + 3L)
Number of Credits: 3

COs	COURSE OUTCOMES
CO1	To review on concept of java script.
CO2	To learn PHP Programming Environments.
CO3	To practice web development using html,java script and PHP
CO4	To learn GUI Application development in PHP

BCS5B10 -Principles of Software Engineering

Contact Hours per Week: 4T
Number of Credits: 3
Number of Contact Hours: 64 Hrs.
Course Evaluation: Internal: 15 Marks + External: 60 Marks

COs	COURSE OUTCOMES
CO1	To learn engineering practices in Software development.
CO2	To learn various software development methodologies and practices.
CO3	To learn and study various Evaluation methods in Software Development.

OPEN COURSES

BCS5D01 - Introduction to Computers and Office Automation

**Contact Hours
per Week: 3 T**
Number of
Credits: 3
Number of Contact Hours: 48 Hrs.
Course Evaluation: Internal – 15 Marks + External – 60 Marks

COs	COURSE OUTCOMES
CO1	To learn Office Automation.
CO2	Basic knowledge in Computer & Internet
CO3	To learn about application software

BCS5D02 - Web Designing

**Contact Hours
per Week: 3 T
Number of
Credits: 3**

Number of Contact Hours: 48 Hrs.

Course Evaluation: Internal – 15 Marks + External – 60 Marks

COs	COURSE OUTCOMES
CO1	To learn Web Designing.
CO2	Basic knowledge in Computer & Internet
CO3	To learn about web designing tools

BCS5D03 - Introduction to Problem Solving and C Programming

**Contact Hours
per Week: 3 T
Number of
Credits: 3**

Number of Contact Hours: 48 Hrs.

Course Evaluation: Internal – 15 Marks + External – 60 Marks

COs	COURSE OUTCOMES
CO1	To introduce fundamental principles of Problem Solving aspects.
CO2	To learn the concept of programming.
CO3	To learn C language.

BCS5D04 - Introduction to Data Analysis using Spread sheet

Contact Hours per Week: 3T

Number of Credits: 3
Number of Contact Hours: 48 Hrs.
Course Evaluation: Internal – 15 Marks + External – 60 Marks

COs	COURSE OUTCOMES
CO1	To introduce fundamental principles spread sheet
CO2	To introduce the importance of software tools.
CO3	To learn the Analysis using Spread sheets.

SEMESTER VI

BCS6B11- Android Programming

Contact Hours per Week:
7 (4T + 3L) Number of
Credits: 3
Number of Contact Hours: 112 Hrs.
Course Evaluation: Internal – 15 Marks + External – 60 Marks

COs	COURSE OUTCOMES
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
CO5	To get Knowledge in OO & Java Programming.

BCS6B12 - Operating Systems

Contact Hours per Week:
7 (4T + 3L) Number of
Credits: 3
Number of Contact Hours: 112 Hrs.

Course Evaluation: Internal – 15 Marks + External – 60 Marks

COs	COURSE OUTCOMES
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
CO5	To get Knowledge in Data structures

BCS6B13 - Computer Networks

Contact Hours per Week:
5 T   Number of Credits:
3

Number of Contact Hours: 80 Hrs.
Course Evaluation: Internal – 15 Marks + External – 60 Marks

COs	COURSE OUTCOMES
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
CO4	To learn about transmissions in Computer Networks.

BCS6B14 - Programming Laboratory III: Lab Exam of Vth Semester Java and PHP Programming

Number of Credits: 4

Course Evaluation: Internal – 20 Marks + External – 80 Marks

COs	COURSE OUTCOMES
CO1	To practice Java programming.
CO2	To practice client side and server side scripting.
CO3	To practice PHP Programming.
CO4	To practice developing dynamic websites.

CO5	To practice how to interact with databases through PHP.

BCS6B15 -Programming Laboratory IV: Lab Exam of Android and Linux Shell Programming

Number of Credits: 4

Course Evaluation: Internal – 20 Marks + External – 80 Marks

COs	COURSE OUTCOMES
CO1	To practice Android programming.
CO2	To practice user interface applications.
CO3	To develop mobile application.
CO4	To practice shell programming
CO5	Theoretical knowledge in Android programming.
CO6	Theoretical knowledge of Shell Programming.

BCS6B17 - Industrial Visit and Project Work

Contact Hours per Week: 4 (0T + 2L in V Sem + 2L in VI Sem)

Number of credits: 2

Number of Contact Hours: 64 Hrs.

Course Evaluation: Internal – 20 Marks + External – 80 Marks

COs	COURSE OUTCOMES
CO1	To practice programming skill
CO2	To practice user interface applications.
CO3	To provide practical knowledge on software development process
CO4	Basic programming and system development knowledge

ELECTIVES

BCS6B16A - System Software

Number of
Credits: 3

Contact Hours per Week: 4
Number of Contact Hours: 64 Hrs.

COs	COURSE OUTCOMES
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.

BCS6B16B - Machine Learning

Number of
Credits: 3

Contact Hours per Week: 4
Number of Contact Hours: 64 Hrs.

Course Evaluation: Internal – 15 Marks + External – 60 Marks

COs	COURSE OUTCOMES
CO1	To familiarize with the basic concepts of Linear Algebra, Probability Theory for Machine Learning.
CO2	Introduce Machine Learning to the graduates and enable them think more scientifically
CO3	The students will be able to understand machine learning concepts
CO4	They also get the essential mathematical and statistical foundations of machine learning

BCS6B16C - Discrete Structures

Number of
Credits: 3

Contact Hours per Week: 4
Number of Contact Hours: 64 Hrs.

Course Evaluation: Internal – 15 Marks + External – 60 Marks

COs	COURSE OUTCOMES
CO1	To learn mathematical logic and Boolean algebra.
CO2	Ability to apply mathematical logic to solve problems.
CO3	Understand sets, relations, functions and discrete structures
CO4	Able to use logical notations to define and reason about fundamental mathematical concepts such as sets relations and functions
CO5	Able to model and solve real world problems using graphs and trees

BCS6B16D - Computer Graphics

Contact Hours per Week: 4
Number of Credits: 3

COs	COURSE OUTCOMES
CO1	To learn the basics of Computer Graphics
CO2	Basic knowledge in Mathematics and Computer fundamentals

BCS6B16E - Technical Writing

Number of
Credits: 3

Contact Hours per Week: 4
Number of Contact Hours: 64 Hrs.

Course Evaluation: Internal – 15 Marks + External – 60 Marks

COs	COURSE OUTCOMES
CO1	To familiarize with the basic concepts of technical writing
CO2	Basic communication skills in English
CO3	The students will be able to Acquire the skills and knowledge for professional technical communication, web content writing
CO4	Develop soft skill development and search engine optimization

BCS6B16F - Fundamentals of Life Skill Education

Number of
Credits: 3

Contact Hours per Week: 4
Number of Contact Hours: 64 Hrs.

Course Evaluation: Internal – 15 Marks + External – 60 Marks

COs	COURSE OUTCOMES
CO1	Develop intra-personal, inter-personal, critical thinking, decision making and communication skills
CO2	Get an insight to career planning and development
CO3	Establish self-management and help to maintain work life balance