



KMCT

ARTS & SCIENCE COLLEGE, KUTTIPPURAM

(Affiliated to the University of Calicut, Approved by Govt. of Kerala and Recognized by UGC under Sec.2(f) of the UGC Act 1956)

DEPARTMENT OF COMPUTER SCIENCE

PROGRAMME : BACHELOR OF COMPUTER SCIENCE

PROGRAM OUTCOMES

- PO1:** Ability to apply knowledge of computing and mathematics appropriate to the discipline.
PO2: Ability to identify, formulate and develop solutions to computational challenges.
PO3: Ability to design, implement and evaluate a computational system to meet desired needs within realistic constraints.
PO4: Understanding of professional, ethical, legal, security and social issues and responsibilities for computing profession.

PROGRAM SPECIFIC OUTCOMES

- PSO1:** Understand various concepts of computing, statistics and mathematics appropriately to the discipline.
PSO2: Apply the fundamental knowledge for professional software development as well as to acquire new skills.
PSO3: Integrate Computer Science, Mathematics and Statistical knowledge to explore different domains data for experimental and research purpose.

COURSE OUTCOMES

Semester I

BCS 1B 01- COMPUTER FUNDAMENTALS AND HTML

- CO1 :** To design web pages
CO2 : Students can understand the basics of computer organization and the fundamentals of computers.
CO3: To familiarize programming environments.
CO4 : Students can use Cascading Style Sheets (CSS) to format web pages and create style sheets
CO5 : Students can apply algorithms and draw flow charts to solve simple problems.

MTS1C01 – MATHEMATICS I

- CO1 :** To understand the fundamental ideas of limit, continuity, and differentiability
CO2 : Increasing and decreasing functions, local maxima, minima, concavity, and inflection points
CO3 : How to apply these ideas in drawing the graphs of functions

STA1C01 – INTRODUCTORY STATISTICS

- CO1 :** Display data graphically and interpret graphs: stem plots, histograms, and box plots.
CO2 : Recognize, describe, and calculate the measures of location of data: quartiles and percentiles.
CO3 : Recognize, describe, and calculate the measures of the centre of data: mean, median, and mode.

Semester II

BCS 2B 02 – PROBLEM SOLVING USING C	CO1 : To equip the students with fundamental principles of Problem Solving aspects. CO2 : Learn about fundamental programming concepts like variables, assignments, conditions, loops, functions, and structures CO3 : To understand C language. CO4 : Implement functions for writing programs CO5 : To equip the students to write programs for solving simple computing problems.
MTS2C02 - MATHEMATICS II	CO1 : To represent points in polar coordinates and convert from one system to another. CO2 : To do the graphing in polar coordinates. CO3 : To find the derivatives and anti-derivatives of hyperbolic and inverse hyperbolic functions.
STA2C02 – PROBABILITY THEORY	CO1 : Understand and use the terminology of probability. CO2 : Determine whether two events are mutually exclusive and whether two events are independent. CO3 : Students learn how to apply formulas like Bayes' formula and the total probability formula. CO4 : Calculate probabilities using the Addition Rules and Multiplication Rules.

Semester III

A11 - PYTHON PROGRAMMING	CO1 : Able to read and write python programs. CO2 : Understand about python programs with functions, loops and conditionals. CO3 : Understand python data structures – lists, tuples, set and dictionaries.
A12 – SENSORS AND TRANSDUCERS	CO1 : To get the basic idea of measurements and the errors associated with measurement. CO2 : To differentiate between the types of transducers available. CO3 : To gain information about the function of various measuring instruments and using them.
BCS3B04 - DATA STRUCTURES USING C	CO1 : To describe the concept of data structures. CO2 : To equip the students implement fundamental data structures. CO3 : Apply data structures to solve real world problems. CO4 : Develop problem-solving skills using data structures.
MTS3C03 - MATHEMATICS III	CO1 : Work on the idea of limit, continuity, and derivative of vector-valued functions. CO2 : Use partial derivatives to find the tangent plane and normal line to a point on a surface. CO3 : Understand the properties and applications of the gradient of a function. CO4 : Work on the idea of complex and its application
STA3C03- PROBABILITY DISTRIBUTIONS AND SAMPLING THEORY	CO1 : Students will understand the concept random variables and types of random variables. CO2 : Students will be able to obtain the probability distributions of random variables. CO3 : Students will understand the concept of discrete random variables and will be able to apply the standard discrete probability distributions like Binomial,Poisson, Geometric to different real life situations.

Semester IV

A13 – DATA COMMUNICATION AND OPTICAL FIBERS	CO1 : Understand the protocols, standards of data communication and various transmissions. CO1 : Identify the types of multiplexing and its application such as telephone system, cellular system and mobile communications. CO1 : Understand optical fiber communication features of LASER diodes and LED.
A14 – MICROPROCESSORS-ARCHITECTURE AND PROGRAMMING	CO1 : Understand the architecture of microprocessors CO2 : Understand the basics of assembly language programming CO3 : Analyse different architecture of microprocessors
BCS4B05 – DATABASE MANAGEMENT SYSTEM AND RDBMS	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
MTS4C04 - MATHEMATICS IV	CO1 : To learn the major classifications of differential equations. CO2 : To learn the conditions for the existence of solution of first and second order initial value problems. CO3 : To learn how to formulate a mathematical model of a physical process.
STA4C04- STATISTICAL INFERENCE AND QUALITY CONTROL	CO1 : Students will understand the concept of Continuous random variables and will be able to apply the standard Continuous probability distributions like Exponential, Pareto, and Normal to different real life situations. CO2 : Students will learn concept and Definitions Related to Testing of hypothesis. CO3 : Students will understand the concept Parametric Tests like Large Sample Test, Small Sample Tests.

Semester V

BCS5B07 – COMPUTER ORGANIZATION AND ARCHITECTURE	CO1 : Understand the concept of logic gates, combinational circuits and sequential circuits. CO2 : Interpret the functional architecture of computer system. CO3 : Analyse the functions of each element in memory hierarchy.
BCS5B08 – JAVA PROGRAMMING	CO1 : To review on concept of OOP. CO2 : To learn Java Programming Environments. CO3 : To learn GUI Application development in JAVA.
BCS5B09 – WEB PROGRAMMING USING PHP	CO1 : Analyse a web page and identify its elements and attributes. CO2 : Describe the general concepts of PHP scripting language for the development of internet websites. CO3 : Apply the basic functions of MySQL database program.
BCS5B10 – PRINCIPLES OF SOFTWARE ENGINEERING	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.
BCS5D01- INTRODUCTION TO COMPUTERS AND OFFICE AUTOMATION	CO1 : To understand about the fundamentals of computer and its components. CO2 : Understand about hardware and software. CO3 : Learn MS word, MS Power point and MS Excel

BCS5D02 – WEB DESIGNING	CO1 : Understand the current technologies in internet. CO2 : Learn the language of the web: HTML,CSS and JavaScript. CO3 : Analyse a web page and identify its elements and attributes.
Semester VI	
BCS6B11 – ANDROID PROGRAMMING	CO1 : Understand android programming environment. CO2 : Specify the activities and code behind the working of an android application and requirement of database. CO3 : Implement the android developing environment And develop a simple android application using database.
BCS6B12 – OPERATING SYSTEMS	CO1 : Describe the important computer system resources and the role of operating system in their management policies and algorithms CO2 : Identify use and evaluate the storage management policies with respect to different storage management technologies CO3 : Understand objectives & functions of Operating Systems and Shell Programming concepts
BCS6B13 - COMPUTER NETWORKS	CO1 : To learn about basics of Computer Networks. CO2 : To learn various Protocols used in Communication. CO3 : To have a general idea on Network Administration.
BCS6B16A – SYSTEM SOFTWARE	CO1 : List loaders types and explain the relocation. CO2 : Apply regular expressions and develop programs CO3 : Acquire knowledge of different phases and passes of the compiler and also able to use the compiler tools like LEX, YACC, etc