DON BOSCO COLLEGE, SULTHAN BATHERY

Affiliated to University of Calicut
(A NAAC accredited & ISO 9001:2015 Certified Institution)
Department Name: Computer Science

Program Outcomes – UG Computer Science

PO 1. **Critical Thinking**: Take informed actions after identifying the assumptions that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational, and personal) from different perspectives.

PO 2. **Effective Communication**: Speak, read, write and listen clearly in person and through electronic media in English and in one Indian language, and make meaning of the world by connecting people, ideas, books, media and technology.

PO 3. **Social Interaction**: Elicit views of others, mediate disagreements and help reach conclusions in group settings.

PO 4. **Effective Citizenship**: Demonstrate empathetic social concern and equity centred national development, and the ability to act with an informed awareness of issues and participate in civic life through volunteering.

PO 5. **Ethics**: Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them.

PO 6. **Environment and Sustainability**: Understand the issues of environmental contexts and sustainable development.

PO 7. **Self-directed and Life-long Learning**: Acquire the ability to engage in independent and life-long learning in the broadest context socio-technological changes

Program Specific Outcomes – UG Computer Science

PSO 1. An ability to understand the principles and working of computer systems.

PSO 2. An ability to understand the structure and development methodologies of software systems.

PSO 3. Familiarity and practical competence with a broad range of programming language and open source platforms.

PSO 4. An ability to apply mathematical methodologies to solve computation task, model real world problem using appropriate data structure and suitable algorithm.

COURSE OUTCOMES

I Semester

BCS1B01 – COMPUTER FUNDAMENTALS AND HTML

SL NO	Learning Outcomes	Level
CO1	Recognize the fundamental concepts of computers with the present level of knowledge	understanding
CO2	Recognise number system and construct basic logic gates	Knowledge
CO3	Identify the Problem solving skill in programming	understanding
CO4	Implement interactive web page(s) using HTML, CSS and JavaScript	Applying

II Semester

BCS2B02 – Problem Solving Using C

SL NO	Learning Outcomes	Level
CO1	Ability to handle possible errors during program execution.	understanding
CO2	Develops the ability to analyze a problem, develop an algorithm to solve it.	Create
CO3	Develops the use of the C programming language to implement various algorithms, and develops the basic concepts and terminology of programming in general.	Creating
CO4	Design and plan the logic of a Program.	Applying

III Semester

BCS3B02 Sensors and Transducers

Course Outcomes:

On completing the course the students will be able to gain an understanding of the concepts, related to sensors which help to possess a career in Electronic appliances

CO1	To understand the concept Analog and digital electronics	Apply
CO2	Perceive the concepts level transducers such as and flow transducers	Apply
CO3	To Understand How to install sequential circuit in Home appliances	Apply
CO4	Explain force and torque transducers and sound transducers	Apply
CO5	Explain resistance, inductance and capacitance transducers	Apply

BCS3B03 Python Programming

Course Outcomes:

On completing the course the students will be able to gain an understanding of the concepts, related to Programming which helps to possess a career in Software field.

CO1	Understand various statements, data types and functions in Python	Understanding
CO2	Develop programs in Python programming language	Creating
CO3	Understand the basics of Object oriented programming using Python.	Understanding

BCS3B04 – Data Structures Using C

Course Outcomes:

On completing the course the students will be able to gain an understanding of the concepts, related to Programming which helps to possess a career in Software field.

CO1	Determine bugs in program, recognise needed basic operations withdata structures	Evaluating
CO2	Formulate new solutions for programming problems or Improve existing code using learned algorithms and data structures	Creating
CO3	Evaluate algorithms and data structures in terms of time and memory complexity of basic operations.	Evaluating
CO4	Compare and contrast the operation of common data structures	Understanding
CO5	Summarize searching and sorting techniques	Understanding

IV Semester

Data Communication and Optical Fibers

Course Outcomes:

On completing the course the students will be able to gain an understanding of the concepts, related to networking which helps to possess a career in Mobile/Computer Networking field.

CO1	To understand the concept and Architecture of Communication System	Understand
CO2	To Analyze the Architecture work of Telecommunication System.	Understand
CO3	To Understand Reliability of Optical Fibre	Apply
CO4	Develop various principles to ensure the standard of Protocols	Apply
CO5	Facilitate the most effective action to implement Computer Networks	Apply

Microprocessors-Architecture and Programming

Course Outcomes:

On completing the course the students will be able to gain an understanding of the concepts, related to Programming which helps to possess a career in Software field.

CO1	Determine bugs in program, recognise needed basic operations with data structures	Evaluating
CO2	Formulate new solutions for programming problems or Improve existing code using learned algorithms and data structures	Creating
CO3	Evaluate algorithms and data structures in terms of time and memory complexity of basic operations.	Evaluating
CO4	Compare and contrast the operation of common data structures	Understanding
CO5	Summarize searching and sorting techniques	Understanding

Database Management System and RDBMS

Course Outcomes:

On completing the course the students will be able to gain an understanding of the concepts, related to Databases which helps to possess a career in Software field.

CO1	Explain the features of database management systems and Relational database	Understand
CO2	Design conceptual models of a database using ER modelling for real life applications and also construct queries in Relational Algebra.	Create
CO3	Create and populate a RDBMS for a real life application, with constraints and keys, using SQL	Create
CO4	Analyse the existing design of a database schema and apply concepts of normalization to design an optimal database	Analyse
CO5	Design a commercial relational database system (Postgres) by writing SQL using the system.	Create

V Semester

Computer Organization and Architecture

Course Outcomes:

On completing the course the students will be able to:

CO1	Design simple logic circuits using logic gates.	Create
CO2	Compare combinational and sequential logic circuits	Analyse
CO3	Distinguish the organization of various functional units of a computer.	Analyse
CO4	Interpret the functional architecture of computing systems.	Apply
CO5	Explain the micro operations taking place in computer operation.	Understand

Java Programming

Course Outcomes:

On completing the course the students will be able to gain an understanding of the concepts, related to OOP which helps them to develop java applications.

CO1	Define what are the main concepts covered by Java.	Remembering
CO2	Demonstrate these OOP concepts with example.	Understanding
CO3	Apply these concepts into a programming methodology	Applying
CO4	Compare Java with previously studied languages.	Analyzing
CO5	Select an environment to develop java.	Evaluating
CO6	Maximize students programming ability.	Creating

Web Programming using PHP

Course Outcomes:

On completing the course the students will be able to gain an understanding of the concepts, related to Programming which helps to possess a career in Software field.

CO1	Implement interactive web page(s) using HTML, CSS and JavaScript	Applying
CO2	Design a responsive web site using HTML5 and CSS3.	Applying
CO3	Build Dynamic web site using server side PHP Programming and Database connectivity	Applying
CO4	Demonstrate Rich Internet Application.	Analyze

Principles of Software Engineering

Course Outcomes:

On completing the course the students will be able to gain an understanding of the concepts, related to sensors which help to possess a career in Electronic appliances

CO1	To learn engineering practices in Software development.	Apply
CO2	To learn various software development methodologies and practices.	Apply
CO3	To learn and study various Evaluation methods in Software Development.	Apply
CO4	To learn application of various CASE tools in SE	Apply
CO5	To Analyse the various methods in Software Development.	Apply

VI Semester

Android Programming

Course Outcomes:

On completing the course the students will be able to gain an understanding of the concepts, related to OOP which helps them to develop android applications.

CO1	***Find*** student ability to develop software with reasonable complexity on mobile platform	Recall
CO2	***Explain*** the fundamentals of Android operating systems	Examine
CO3	***Apply*** Java programming concepts to Android application development.	Apply
CO4	***Investigate*** how to debug and deploy software to mobile devices	Analyze
CO5	***Asses*** students skills of using Android software development tools	Evaluate
CO6	***Design*** and develop user Interfaces for the Android platform.	Create

Operating Systems

Course Outcomes:

On completing the course the students will be able to gain an understanding of the concepts, related to Operating Systems which help to possess a career in IT field.

CO1	Explain the important computer system resources and the role of operating system in their-management policies.	Understand
CO2	Evaluate the requirement for process synchronization and coordination handled by operating system	Evaluate

CO3	Experiment with the high-level structure of the Linux kernel both in concept and source code.	Apply
CO4	Analyze the memory management and its-allocation policies.	Analyze
CO5	Identify use and evaluate the storage management policies with respect to different storage management-Technologies	Apply

Computer Networks

Course Outcomes:

On completing the course the students will be able to gain an understanding of the concepts, related to Data Communication and networking which helps to possess a career in Networking field.

CO1	Describe various technologies used for data communication	Remembering
CO2	Identify possible errors in data transfer and solutions for them	Remembering
CO3	Describe the various protocols used in data communication	Remembering
CO4	Classify the routing protocols and analyze how to assign the IP addresses for the given network	Apply
CO5	Identify security issues in networks and available protection mechanisms	Remembering

System Software

SL NO	Learning Outcomes	Level
CO1	Distinguish between Operating Systems software and Application Systems software	Analyze
CO2	Design loader and linker.	Creating
CO3	Analyze macro processors	Analyzing
CO4	Design one pass, two pass or multi pass assembler	Creating