



Yogoda Satsanga Mahavidyalaya

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(NACC Accredited, Grade: B++, CGPA: 2.89)

COURSE OUTCOME OF BCA DEPARTMENT

Semester	Course Code	Course Name	Course Outcome
I	C1	Programming Fundamental using C/C++	<ol style="list-style-type: none">1. Describe the procedural and object oriented paradigm with concepts of streams, classes, functions, data and objects.2. Understand how to write correct program3. Describe the concept of function overloading, operator overloading, virtual functions and polymorphism.
	C2	Computer System Architecture	<ol style="list-style-type: none">1. Explain design of digital circuit and functioning of CPU2. Explain the organization of basic computer, its design and the design of control unit3. Describe the operations and language of the register transfer, micro operations and input- output organization.
II	C3	Programming in JAVA	<ol style="list-style-type: none">1. Write Java application programs using OOP principles and proper program structuring.2. Develop Java program using packages, inheritance and interface.3. Create Multithreaded programs.4. Write Java programs to implement error handling techniques using exception handling and develop programs using class and inputs from keyboard.5. Develop graphical User Interface using AWT.6. Demonstrate event handling mechanism.
	C4	Discrete Structures	<ol style="list-style-type: none">1. Understand basic data structures such as arrays, linked lists, stacks and queues.2. Describe the hash function and concepts of collision and its resolution methods3. Solve problem involving graphs, trees and heaps4. Apply Algorithm for solving problems

			like sorting, searching, insertion and deletion of data
III	C5	Data Structures with C +Lab	<ul style="list-style-type: none"> 1. Understand basic data structures such as arrays, linked lists, stacks and queues. 2. Describe the hash function and concepts of collision and its resolution methods 3. Solve problem involving graphs, trees and heaps 4. Apply Algorithm for solving problems like sorting, searching, insertion and deletion of data
	C6	Operating Systems. +Lab	<ul style="list-style-type: none"> 1. Understand the basics of operating systems like kernel, shell, types and views of operating systems 2. Describe the various CPU scheduling algorithms and remove deadlocks. 3. Explain various memory management techniques and concept of thrashing 4. Use disk management and disk scheduling algorithms for better utilization of external memory. 5. Recognize file system interface, protection and security mechanisms.
	C7	Computer Networks +Lab	<ul style="list-style-type: none"> 1. Understand computer network basics, network architecture, TCP/IP and OSI reference models. 2. Identify and understand various techniques and modes of transmission 3. Describe data link protocols, multi-channel access protocols and IEEE 802 standards for LAN 4. Describe routing and congestion in network layer with routing algorithms and classify IPV4 addressing scheme
	SEC 1	Elementary Computer Application Software	<ul style="list-style-type: none"> 1. Can perform typing and formatting 2. Habituated in mail merge application 3. Apply excel in different area like ,statistics, finance and present using excel chart 4. Preapration of presentation
IV	C8	Design and Analysis of Algorithms +Lab	<ul style="list-style-type: none"> 1. Identify the problem given and design the algorithm using various algorithm design techniques. 2. Implement various algorithms in a high level language. 3. Analyse the performance of various algorithms. 4. Compare the performance of different algorithms for same problem

	C9	Software Engineering Theory +Lab	<ol style="list-style-type: none"> 1. Plan a software engineering process life cycle , including the specification, design, implementation, and testing of software systems that meet specification, performance, maintenance and quality requirements 2. Able to elicit, analyse and specify software requirements through a productive working relationship with various stakeholders of the project 3. Analyze and translate a specification into a design, and then realize that design practically, using an appropriate software engineering methodology. 4. Know how to develop the code from the design and effectively apply relevant standards and perform testing, and quality management and practice 5. Able to use modern engineering tools necessary for software project management, time management and software reuse.
	C10	Database Management Systems +Lab	<ol style="list-style-type: none"> 1. Describe DBMS architecture, physical and logical database designs, database modeling, relational, hierarchical and network models. 2. Identify basic database storage structures and access techniques such as file organizations, indexing methods including B-tree, and hashing. 3. Learn and apply Structured query language (SQL) for database definition and database manipulation. 4. Demonstrate an understanding of normalization theory and apply such knowledge to the normalization of a database. 5. Understand various transaction processing, concurrency control mechanisms and database protection mechanisms.
	SEC 2	HTML & PHP Programming+ Lab	<ol style="list-style-type: none"> 1. Be able to use the HTML programming language Design static web page 2. Write PHP scripts to handle HTML forms 3. Write regular expressions including modifiers, operators, and meta characters. Outcome. 4. Create PHP programs that use various PHP library functions, and that manipulate files and directories.
V	C11	Internet Technologies +Lab	<ol style="list-style-type: none"> 1. Discuss the insights of internet programming and implement complete

			<p>application over the web.</p> <ol style="list-style-type: none"> 2. Demonstrate the important HTML tags for designing static pages and separate design from content using Cascading Style sheet. 3. Utilize the concepts of JavaScript and Java 4. Utilize the concept of JSP, Servlets and JavaBean
	C12	Theory of Computation + Lab	<ol style="list-style-type: none"> 1. Understand the basic concepts of formal languages, automata and grammar types, as well as the use of formal languages and reduction in normal forms 2. Demonstrate the relation between regular expressions, automata, languages and grammar with formal mathematical methods 3. Design push down automata, cellular automata and Turing machines performing tasks of moderate complexity 4. Analyze the syntax and formal properties, parsing of various grammars such as LL(k) and LR(k) 5. Describe the rewriting systems and derivation languages
	DSE 1	Information Security +Lab	<ol style="list-style-type: none"> 1. Define the security controls sufficient to provide a required level of confidentiality, integrity, and availability in an organization's computer systems and networks. 2. Understand the different cryptographic principle. 3. Design, develop, test and evaluate secure software. 4. Develop policies and procedures to manage enterprise security risks.
	DSE 2	Cloud computing +Lab	<ol style="list-style-type: none"> 1. Reduces implementation and maintenance costs 2. How to provide Flexible and scalable infrastructures 3. Increased availability of high-performance applications to small/medium-sized businesses 4. case studies will help us to understand more of practice of cloud computing in the market.
VI	C13	Artificial Intelligence +Lab	<ol style="list-style-type: none"> 1. Understand the theoretical base of the expert system and its development process. 2. Differentiate between different knowledge representation techniques and describe methods of knowledge acquisition and extraction.

			<p>3. Describe various learning and planning techniques for different types of expert systems such as neural, fuzzy and real expert system.</p> <p>4. Develop expert systems using various available tools</p>
	C14	Computer Graphics with Flash +Lab	<p>1. Understand the basics of computer graphics, different graphics systems and applications of computer graphics.</p> <p>2. Discuss various algorithms for scan conversion and filling of basic objects and their comparative analysis.</p> <p>3. Use of geometric transformations on graphics objects and their application in composite form.</p> <p>4. Extract scene with different clipping methods and its transformation to graphics display device.</p> <p>5. Explore projections and visible surface detection techniques for display of 3D scene on 2D screen</p>
	DSE 3	Numerical Method+ Lab	<p>1. Able to assess the approximation techniques to formulate and apply appropriate strategy to solve real world problems.</p> <p>2. Understanding the theoretical and practical aspects of the use of numerical methods.</p> <p>3. Able to establish the limitations, advantages, and disadvantages of different numerical methods. Further, they would be able to implement numerical methods for solving various engineering problems.</p>
	DSE 4	OJT & Project Work/ Dissertation	<p>Understand real life application</p> <p>Exposure of working in the industry</p>