

TECNIA INSTITUTE OF ADVANCED STUDIES
NAAC Accredited Grade 'A' Institute
Department of Computer Applications
BCA Ref. No.

TIAS/BCA/2021-22/

BCA 171	Practical – I 'C' Prog. Lab	1) To be able to build own logic for a given problem and finally develop one's own programs	CO 1: Student will able to learning process helps in deep understanding the concepts of C language.
		2) To understand the syntax and the semantics of C programming language.	CO2 : Students will able to Developing programs using control statements, Arrays and Strings.
		3)To teach the student to write programs in C and to solve the problems.	CO3: Student will able to Enabling effective usage of arrays, structures, functions and pointers.
		4)To learn problem solving techniques.	CO4 : Student will able to Implementing the files and command line arguments.
BCA 173#	Practical – II IT Lab	1) The objective of the course is to introduce the concepts of computer fundamental	CO1: Demonstrate the basic technicalities of creating Word documents for office use.
		2) Efficient use of computer applications and its technology in a business environment	CO2: Create and design a spreadsheet for general office.
		3) Describe the major components of computers and information technology applications: Hardware, software, data, processes, computer networks and people	CO3: Apply the basic technicalities of creating a PowerPoint presentation.
		4) Demonstrate an understanding of the importance of algorithms in the development of IT applications	CO4: Demonstrate the practices in data & files management.
BCA 175#	Practical III Web Tech Lab	Able to build a static website using HTML	Analyze a web page and identify its elements and attributes.

		Able to include JavaScript for validations	Create web pages using XHTML and Cascading Style Sheets. ·
		Students able to implement dynamic websites using PHP	Build dynamic web pages using JavaScript (Client side programming). ·
		Able to develop Web applications by using JSP with Database Connectivity	Create XML documents and Schema.
BCA 172	Practical IV WBP lab	Understand the principles of creating an effective web page, including an in-depth consideration of information architecture.	Understand the major areas and challenges of web programming.
		Become familiar with graphic design principles that relate to web design and learn how to implement theories into practice	Use advanced topics in HTML5, CSS3, JavaScript
		Learn the language of the web: HTML and CSS	Use PHP to access a MySQL database
		Develop basic programming skills using Javascript and jQuery	Use a server-side scripting language, PHP
BCA 174	Practical – V DS Lab	1) Understand the use and working of the various data structures.	CO:1. Students will Be able to design and analyse the time and space efficiency of the data structure .
		2) Learn to be able to build own algorithms and pseudocodes for the various applications of the basic data structures.	CO:2. Students will Be capable to identity the appropriate data structure for given problem .
		3)To design and implement various data structure algorithms	CO:3. Student will Have practical knowledge on the applications of data structures.
		4)To develop application using data structure algorithms.	CO 4: Students will be able to perform searching & sorting operation on data .

BCA 176#	Practical – VI DBMS Lab	1) The objective of this lab course is to understand the practical applicability of database management system concepts.	CO1: Demonstrate an understanding of the relational data model.
		2) The objective of this lab is Working on existing database systems, designing of database, creating relational database, analysis of table design.	CO2. Transform an information model into a relational database schema and to use a data definition language and/or utilities to implement the schema using a DBMS.
		3) To understand RDBMS and queries to design database and manipulate data in it.	CO3: Formulate, using relational algebra, solutions to a broad range of query problems.
		4) Programming PL/SQL including stored procedures, stored functions, cursors, packages	CO4: Formulate, using SQL, solutions to a broad range of query and data update problems
BCA 271#	Practical – VII C++ Lab#	1) To provide practical experience in implementing object oriented programming concepts such as objects, Class, Data Abstraction and Inheritance.	CO1: Explain the features of C++ Programming language, C++ compilers and standard libraries.
		2) To design and develop programs using bottom up design approach in C++.	CO2: Design and develop programs using the concept of classes and objects.
		3) To get know about polymorphism and Inheritance	CO3: Apply the concepts of polymorphism and inheritance.
		4) To get the knowledge of Templates design	CO4: Develop programs using concepts of generic programming and file handling.
BCA 272	Practical – VII Java Lab	1) To enhance the knowledge of object-oriented programming using the Java Programming language	CO1: Apply the model of object oriented programming and fundamental features of an object oriented language.
		2) To understand the applets, files, swings and exception handling mechanisms.	CO2: Create document and prepare a professional looking package for each business project.

		3) To identify Java language components and how they work together in applications.	CO3:Develop computer program to solve specified problems and apply Java SDK environment to create, debug and run Java programs.
		4) Understand the fundamentals of object-oriented programming in Java, including defining classes, objects, invoking methods etc and exception handling mechanisms.	CO4:Demonstrate and develop programs for inheritance, multithreading, applets, exception handling and file handling.
BCA 274	Practical IX SE Lab	Learn about software myths ,generic view of the process and Understand about process models	Design and develop real-time software projects with effective cost estimation and plan
		Learn how to perform feasibility study of the projects under the requirement engineering process and system models.	Make feasibility study of a project
		Understand about Function oriented design and Architectural styles	Specify the design and architectural style of the software products
		Get the knowledge of software testing and testing strategies, learn about risk management plan and quality concepts.	Propose testing strategy for a given software
BCA 371	Practical – X Linux - OS Lab	Students will understand and make effective use of linux utilities and shell scripting language to solve problems.	Students will be able to understand the basic commands of linux operating system and can write shell scripts.
		To develop the skills for systems programming including file system programming.	Students will be able to build shell program for process and file system management with system calls.
		To learn the important Linux/UNIX library functions and system calls.	Students will be able to create processes like background and fore ground by fork() system calls.

		To develop the basic skills required to write network programs using sockets.	Students will be able to analyze a given problem and apply learning of SHELL programming to devise a SHELL script to solve the problem.
BCA 373	Practical – XI CG Lab	1) To learn the basic concepts of Computer Graphics	CQ1: Students will be able to explain basics of computer graphics & its applications.
		2) To understand the need of developing graphics application .	CO2: Students will be able to design and develop programs for drawing Computer Graphics primitives.
		3) To study the algorithmic development of graphics primitives like: line, circle, polygon etc.	CO3: Students will be able to represent algorithms for line clipping,
		4) To make student aware about the representation and transformation of graphical images and pictures.	CO4 :Student will be able to describe polygon filling ideas and rendering techniques.
BCA	Practical-XII IOT Lab	Introduce evolution of internet technology and need for IoT.	Identify the IoT networking components with respect to OSI layer.
		Discuss on IoT reference layer and various protocols and software.	Design and develop IoT based sensor systems.
		Train the students to build IoT systems using sensors, single board computers and open source IoT platforms	Evaluate the wireless technologies for IoT.
		Make the students to apply IoT data for business solution in various domain in secured manner	Appreciate the need for IoT Trust and variants of IoT.