

TECNIA INSTITUTE OF ADVANCED STUDIES

NAAC Accredited Grade 'A' Institute

Department of Information, Communication & Technology
BACHELOR OF COMPUTER APPLICATIONS - BCA

Ref. No. TIAS/BCA/2021-22/112

Dated: 01.12.2021

-: CBCS Course Structure for BCA Programme:-

Semester wise placement of the courses					
Semester	CORE COURSE (18)	Ability Enhancement Compulsory Course (AECC) (3)	Skill Enhancement Course (SEC) (2)	Elective: Discipline Specific (DSE) (5)	Elective: Generic (GE) (2)
I Total Credits 26	CC1 (4) Discrete Mathematics	AECC 1 (4) Technical Communication			
	CC2 (4+2) Programming using 'C' Language				
	CC3(4+2) Fundamentals of IT & Computers				
	CC4 (4) Web Technologies				
II Total Credits 26	CC5 (4) Applied Mathematics	AECC2 (2) Environment Studies	SEC -1 (2)		
	CC6 (4+2) Web Based Programming				
	CC7 (4+2) Data Structures & Algorithm Using 'C'				
	CC8 108 (4+2) Database Management System				
III Total Credits 27	CC9 (4) Computer Network	AECC3(2) Human Values and ethics	SEC -2 (2)	DSE- 1 (4+1)	Any course from the list GE-1(4)
	CC10 (4) Computer Organization and Architecture				
	CC11 (4+2) Object Oriented Programming with C++				
IV Total Credits 27	CC12(4+2) Java Programming	AECC4 (4) Introduction to Management & Entrepreneurship Development Programme	SEC-3 (2) Personality Development Skills	DSE -2 (4+1)	Any course from the list GE-2 (4)
	CC13 (4+2) Software Engineering				

V Total Credits 27	CC14 (4+2) Operating System & Linux Programming	AECC 5 Minor Project (4)	SEC-4 (2) Summer Internship	DSE -3 (4+1)	
	CC15(4+2) Computer Graphics				
	CC 16 (4) Cloud Computing				
VI Total Credits 27	CC17 (4) Data warehousing and Data Mining	AECC 6 Major Project (6)	SEC-4 (2) Seminar/ Conference Presentation	DSE -4 (4+1)	
	CC18 (4) E-Commerce				
	CC19 (4+2) Internet of Things				

1.1 Skill Enhancement Course 1 (SEC-1)

SEC 1 (choose one) Skill development course from the following	SEC 2 (choose one)
(i) MOOC course from SWAYAM/NPTEL of minimum 2 credits. Certificate is mandatory for the degree (ii) Front End Design Tool VB.Net Lab (iii) Statistical Analysis using Excel (iv) Designing Lab Photoshop	(i) MOOC course from SWAYAM/NPTEL of minimum 2 credits. Certificate is mandatory for the degree (ii) Designing Lab Corel Draw (iii) ASP.Net (iv) AR/VR

1.2 Discipline Specific Electives (DSE) (Choose any One Group of DSE)

Every institution shall offer at least to DSE groups to the students subject to conditions enumerated in this document.

DSE-A- Data Science & Analytics	DSE-B - Artificial intelligence & Machine Learning
1. Basics of Python Programming 2. Introduction to Data Science 3. Data Visualization & Analytics 4. Machine Learning with Python	1. Basics of Python Programming 2. Introduction to Artificial Intelligence 3. Machine Learning with Python 4. Deep Learning with Python
DSE-C - Cyber Security	DSE-D - Software Development
1. Cyber Security 2. Network Security 3. Web Security 4. IT Acts and Cyber Laws	1. Basics of Python Programming 2. Web Development with Python 3. Web Development with Java JSP 4. Mobile Application Development

1.3 Generic Elective (GE) BCA Students

GE 1 (choose any one)	GE 2 (choose any one)
(i) Principles of Management & Organizational Behaviour (ii) Any one paper offered as open elective by other School/ Department/Programme	(i) Digital Marketing (ii) Principles of Accounting (iii) Any one paper offered as open elective by other School/ Department/Programme

1.4 Generic (Open) Electives for other undergraduate programmes

The following core courses of BCA programme may be offered as Generic Elective for undergraduate programmes. Maximum number of students from other School/Department/Programme should not exceed 20% of total intake for the programme.

S.No.	Semester	Subject Code	Subject Name
1.	I	BCA 105 BCA 173	Fundamental of Computers & IT Practical -II IT Lab
2.	I	BCA 107 BCA 175	Web Technologies Practical -III Web Tech Lab
3.	II	BCA 108 BCA 176	Database Management System Practical -VI DBMS Lab
4.	III	BCA 205 BCA 271	Object Oriented Programming using C++ Practical -VI C++ Lab
5.	III	BCA 211	Basics of Python Programming
6.	VI	BCA 304	E-Commerce

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