



TECNIA INSTITUTE OF ADVANCED STUDIES

NAAC GRADE "A" INSTITUTE (CYCLE-1)

Approved by AICTE, Ministry of Education Govt. of India,
Affiliated to G.G.S.I.P. University & Recognized Under Sec. 2(f) of UGC Act 1956.
INSTITUTIONAL AREA, MADHUBAN CHOWK, ROHINI, DELHI-110085

Department of Information, Communication & Technology

Bachelor of Computer Applications (BCA) 4Yrs.

Scheme and Syllabus (w.e.f. Academic Session 2024-25)

As per UGC Curriculum & Credit Framework for Undergraduate Programme (CCFUP) (Dec 2022): GGSIP University, Delhi

COURSES

FIRST SEMESTER						SECOND SEMESTER					
C.CODE	COURSE	NEP CT	L	T/P	CREDITS	C.CODE	COURSE	NEP CT	L	T/P	CREDITS
BCA101T	Programming for Problem Solving using C	CCT	4	-	4	BCA102T#	Database Management System	CCT	4	-	4
BCA103T	Fundamental of Information Technology	CCT	4	-	4	BCA104T	Object Oriented Programming using Java	CCT	4	-	4
BCA105T#	Web Technologies#	CCT	4	-	4	BCA106T	Data Structures and algorithms	CCT	4	-	4
BCA107T	Mathematical Foundation for Computer Science	CCT	4	-	4	BCA108T	Software Engineering	CCT	4	-	4
BCA101P	Programming for Problem Solving using C Lab	CCP	-	4	2	BCA102P#	Database Management System Lab	CCP	-	2	1
BCA103P	Fundamental of Information Technology Lab	CCP	-	4	2	BCA104P	Object Oriented Programming using Java Lab	CCP	-	4	2
BCA141T	Writing Skills	AEC	3	-	3	BCA106P	Data Structures and algorithms Lab	CCP	-	2	1
BCA105P#	Web Technologies Lab	SEC	-	2	1	BCA108P	Software Engineering Lab	CCP	-	2	1
BCA191T*	Understanding India*(NUES)	VAC	2	-	2	BCA142T	Soft Skills	AEC	3	-	3
BCA181T+	Bridge Course in Mathematics+(NUES)	BC	2	-	-	BCA192T	Environment Studies	VAC	2	-	2
Total					26	Total					26
THIRD SEMESTER						FOURTH SEMESTER					
C.CODE	COURSE	NEP CT	L	T/P	CREDITS	C.CODE	COURSE	NEP CT	L	T/P	CREDITS
BCA201T	Python Programming	CCT	4	-	4	BCA202T	Operating Systems	CCT	4	-	4
BCA203T#	Dynamic Web Designing	CCT	4	-	4	BCA204T	Software Testing	CCT	4	-	4
BCA205T	Computer Organization and Architecture	CCT	4	-	4	BCA202P	Operating Systems Lab	CCP	-	2	1
BCA207T	Discrete Mathematics	CCT	4	-	4	BCA204P	Software Testing Lab	CCP	-	2	1
BCA201P	Python Programming Lab	CCP	-	4	2	BCA232	Introduction to Logic & Critical Thinking	AEC	-	4	2
BCA203P#	Dynamic Web Designing Lab	CCP	-	2	1	BCA234*	Health & Wellness, Yoga Education and Sports & Fitness*	SEC	-	4	2
BCA205P	Computer Organization and Architecture Lab	CCP	-	2	1	BCA212T	Introduction to Data Science	PCE	4	-	4
BCA261*	Vocational Course*	SEC	4	-	4	BCA212P	Data Science Lab	PCE	-	4	2
BCA221T	Principles of Management&Organizational Behavior	GE-1	3	-	3	BCA216T	Introduction to Security, Acts and Cyber Laws and Cyber Security	PCE	4	-	4
BCA223T	Open Elective other Department/Programme	GE-1	3	-	3	BCA216P	Introduction to Security, Acts and Cyber Laws and Cyber Security Lab	PCE	-	4	2
BCA291T*	Human Values & Ethics*(NUES)	VA	2	-	2	BCA218T	Web Development Using Python	PCE	4	-	4
Total					29	BCA218P	Web Development Using Python Lab	PCE	-	4	2
FIFTH SEMESTER						SIXTH SEMESTER					
C.CODE	COURSE	NEP CT	L	T/P	CREDITS	C.CODE	COURSE	NEP CT	L	T/P	CREDITS
BCA301T	Computer Networks	CCT	4	-	4	BCA302T	Distributed systems and Cloud Computing	CCT	4	-	4
BCA303T	Artificial Intelligence	CCT	4	-	4	BCA304T	Machine Learning	CCT	4	-	4
BCA301P	Computer Networks Lab	CCP	-	2	1	BCA306T	Software Project Management	CCT	4	-	4
BCA303P	Artificial Intelligence Lab	CCP	-	4	2	BCA302P	Distributed systems and Cloud Computing Lab	CCP	0	2	1
BCA305T	Natural Language Processing	PCE	4	-	4	BCA306P	Software Project Management Lab	CCP	0	2	1
BCA305P	Natural Language Processing Lab	PCE	-	4	2	BCA312T	Data Visualization & Analytics	PCE	4	-	4
BCA307T	Network Security	PCE	4	-	4	BCA312P	Data Visualization & Analytics Lab	PCE	-	4	2
BCA307P	Network Security Lab	PCE	-	4	2	BCA314T	Deep Learning with Python	PCE	4	-	4
BCA309T	Full Stack Development using Java	PCE	4	-	4	BCA314P	Deep Learning with Python Lab	PCE	-	4	2
BCA309P	Full Stack Development using Java Lab	PCE	-	4	2	BCA316T	Web Security	PCE	4	-	4
BCA311*	Summer Training*	SI	0	0	4	BCA316P	Web Security Lab	PCE	-	4	2
BCA313T	Intro. to Mgt & Entrepreneurship Development	GE-3	3	0	3	BCA318T	Mobile Application Development	PCE	4	-	4
BCA315T*	MOOC Course*	GE-3	3	0	3	BCA318P	Mobile Application Development Lab	PCE	-	4	2
Total					24	BCA320	Minor Project	PRJ	0	14	6
SEVENTH SEMESTER						BCA304P	Machine Learning Lab	SEC	0	2	1
C.CODE	COURSE	NEP CT	L	T/P	CREDITS	BCA374**	NSS/NCC/Cultural Clubs/Technical Society / Technical Clubs	VA	0	0	2
BCA401T	E-Commerce	CCT	4	-	4	Total					29
BCA403T	Internet Of Things (IOT)	CCT	4	-	4						
BCA401P	E-Commerce Lab	CCP	-	2	1						
BCA403P	Internet Of Things (IOT) lab	CCP	-	2	1						
BCA405	Major Project-1	PRJ	0	12	6						
BCA461**	Vocational Course	SEC	0	-	2						
Total					18						
EIGHTH SEMESTER											
C.CODE	COURSE	NEP CT	L	T/P	CREDITS						
BCA402	Major Project-2	PRJ	20	0	10						
BCA404	Industry Internship Report	IIR	20	0	10						
Total					10						

The whole syllabus is divided into following types:			
ABBR.	NEP Course Type	ABBR.	NEP Course Type
CCT	Core Courses Theory	GE	Multidisciplinary(Generic Ele)
CCP	Core Courses Practical	PCE	Programme Core Elective
AEC	Ability Enhancement Courses	SI	Summer Internship
SEC	Skill Enhancement Courses	MOOCs	MOOC Courses
VA	Value Added Courses	PRJ	Minor/ Major Project
NUES	Non Univ. Exam. System	IIR	Industry Internship Report
BC	Bridge Course		

Head of the Department
Department of Information, Communication & Technology