



JAGAT GURU NANAK DEV
PUNJAB STATE OPEN UNIVERSITY, PATIALA
A State University Established by Govt. of Punjab vide Act No. 19
of 2019 and Approved Under section 2(f) of UGC

School of Sciences & Emerging Technologies

Course Scheme

4-Years Bachelor of Computer Applications (Honours)

4-Years BCA (Honours)

From Admission Cycle July 2024

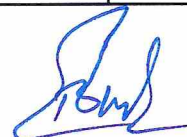
Table I: Basic Structure, Distribution of Courses, Type of Courses and Credits as per NEP-2020

S. No.	Broad Category of Course	Credits	
		3-Years BCA	4-Years BCA
1	Major (Core) Courses	62	80
2	Minor Stream Courses (Minor SC)	36	42
3	Multidisciplinary Courses (MDC)	10	14
4	Ability Enhancement Courses (AEC)	08	14
5	Skill Enhancement Courses (SEC)	10	10
6	Value Enhanced Courses (VEC)	06	06
7	Summer Internship	04	04
8	Research Project	-	12
	Total	136	182


28/01/25

Table II: Detail of 4-Years BCA (Honours) Courses

Course Code	Course Title	Internal Marks	External Marks	Total Marks	Credits	Course Type
Semester I						
BCA-1-01T	Computer Programming	30	70	100	4	Major (Core)
BCA-1-02T	Fundamentals of Computer	30	70	100	6	Major (Core)
BCA-1-03T	Probability and Statistical Analysis	30	70	100	6	MDC
BCA-1-01P	Computer Programming Lab	15	35	50	2	Major (Core)
BCS-2-01T	Basic Communication Skills	30	70	100	6	AEC
BCA-1-VEC-1	Sikh Heritage and Ethos *	0	0	0	0	VEC
Total		135	315	450	24	
Semester II						
BCA-2-01T	Operating Systems	30	70	100	4	Major (Core)
BCA-2-02T	Python Programming	30	70	100	4	Major (Core)
FDM-1-02T	Fundamentals of Digital Marketing	30	70	100	6	SEC
BCA-2-01P	Operating System Lab	15	35	50	2	Major (Core)
BCA-2-02P	Python Programming Lab	15	35	50	2	Major (Core)
BCA-2-ENVS	Environmental Studies	30	70	100	4	MDC
BCA-2-VEC-2	Human Rights and Duties	30	70	100	4	VEC



Total		180	420	600	26	
Semester III						
BCA-3-01T	Database Management Systems	30	70	100	4	Major (Core)
BCA-3-02T	Data Structures	30	70	100	4	Major (Core)
BCA-3-03T	Computer System Architecture	30	70	100	4	Major (Core)
BCA-3-04T	Introduction to Data Science	30	70	100	6	Minor SC
BCA-3-01P	Database Management Systems Lab	15	35	50	2	Major (Core)
BCA-3-02P	Data Structures Lab	15	35	50	2	Major (Core)
BCA-3-VEC-3	Drug Abuse: Problem, Prevention and Management	15	35	50	2	VEC
Total		165	385	550	24	
Semester IV						
BCA-4-01T	Software Engineering	30	70	100	6	Major (Core)
BCA-4-02T	Computer Networks	30	70	100	4	Major (Core)
BCA-4-03T	Object Oriented Programming	30	70	100	4	Major (Core)
BCA-4-04T	Computer Graphics	30	70	100	4	Major (Core)
BCA-4-03P	Object Oriented Programming Lab	15	35	50	2	Major (Core)
BCA-4-04P	Computer Graphics Lab	15	35	50	2	Major (Core)
Total		150	350	500	22	

Semester V						
BCA-5-01T	Introduction to Cyber Security	30	70	100	4	Minor SC
BCA-5-01P	Introduction to Cyber Security Lab	15	35	50	2	Minor SC
BCA-5-02T-.....	Elective Category paper – A1 or A2 or A3	30	70	100	6	Minor SC
BCA-5-03T-.....	Elective Category paper – B1 or B2 or B3	30	70	100	4	Minor SC
BCA-5-03P-....	Elective Category paper – B1 or B2 or B3 Lab	15	35	50	2	Minor SC
BCA-5-04	Seminar	15	35	50	2	AEC
Total		135	315	450	20	
Semester VI						
BCA-6-01T....	Elective Category paper – C1 or C2 or C3	30	70	100	4	Minor SC
BCA-6-01P....	Elective Category paper – C1 or C2 or C3 Lab	15	35	50	2	Minor SC
BCA-6-02P	Minor Project	45	105	150	6	Minor SC
BCA-6-03T	Technical Report Writing & IPR	30	70	100	4	SEC
BCA-6-04	Summer Internship	30	70	100	4	Summer Internship
		150	350	500	20	
Semester VII						
BCA-7-01T	Research Methodology & Statistical Analysis	30	70	100	6	Major (Core)
BCA-7-02T	Optimization Techniques	30	70	100	6	Minor SC
BCA-7-03T	Digital Image Processing	30	70	100	4	Major (Core)

BCA-7-02P	Digital Image Processing Lab	15	35	50	2	Major (Core)
BCA-7-04T	Entrepreneurship Development	30	70	100	6	AEC
		135	315	450	24	
Semester VIII						
BCA-8-01T	Organizational Behavior	30	70	100	4	MDC
BCA-8-02T	Web Designing & Development	30	70	100	4	Major (Core)
BCA-8-02P	Web Designing & Development Lab	15	35	50	2	Major (Core)
BCA-8-03P	Research Project	60	140	200	12	Research Project
Total		135	315	450	22	
Grand Total		1185	2765	3950	182	

Elective -1 (Category)	Artificial Intelligence and Data Science
<i>A. Introduction of Artificial Intelligence: BCA-5-02T-EC-A1</i>	
<i>B. Machine-learning : DAIDS-2-01T</i>	
<i>C. Data Mining and Visualization: DAIDS-2-02T</i>	
Elective - 2 (Category)	Cyber Security
<i>A. Cyber Laws: BCA-5-02T-EC-A2</i>	
<i>B. Digital Forensics: DCS-2-01T</i>	
<i>C. Cyber Attacks and Counter Measures: DCS-2-02T</i>	

Elective - 3 (Category)	Mobile Application Development
<i>A. Introduction Mobile Architecture: BCA-5-02T-EC-A3</i>	
<i>B. Introduction to Android: DMAD-1-03T</i>	
<i>C. Introduction to Windows Mobile and IOS: DMAD-2-01T</i>	

For elective courses, learners can choose elective courses from any elective courses' category (1 or 2 or 3). Selected category will not be changed during the Programme for selecting courses. Student will choose all elective courses from the selected elective category during the Programme.

***This is compulsory non-credit qualifying course. Though this is on-credit course, it is important for a learner to qualify this, failing which the degree will not be awarded.**

John
28/01/25