NAGINDAS KHANDWALA COLLEGE OF COMMERCE, ARTS & MANAGEMENT STUDIES

Programme: Bachelor of Science (Computer Science)
Academic year: 2025-26
Curriculum Framework of First Year under NEP

Level	Sem.	Major		Minor	OE	VSC, SEC (VSEC)	AEC, VEC, IKS	OJT, FP, CEP, CC, RP	Credits	Cumulative Credits
		Mandatory (DSC 1 and DSC 2)	**Electives**							
4.5	I	Introduction to Programming Operating Systems (03+03 = 06)	---	---	Fundamentals of Computers and Electronics Making Effective Presentations (02+02 = 04)	**VSC:** Web Programming-I (02) **SEC:** Discrete Mathematics-I (02)	**AEC:** Business Communication I / Hindi / Marathi / Gujarati / Sanskrit / French (02) **VEC:** Environmental Studies I (02) **IKS:** Indian Knowledge System (02)	CC: NSS, NCC, Sports, Cultural, Yoga, Music, Performing Arts, DLLE (02)	**22**	44 (UG Certificate)
	II	Object Oriented Programming Database Management Systems – I (03+03 = 06)	---	Programming and Application Development in Python (02)	IT platforms, Tools and Practices Data Analysis Using Spreadsheets (02+02 = 04)	**VSC:** Web Programming –II (02) **SEC:** Discrete Mathematics-II (02)	**AEC:** Business Communication II / Hindi / Marathi / Gujarati / Sanskrit / French (02) **VEC:** Environmental Studies II (02) **IKS**: ----	CC: NSS, NCC, Sports, Cultural, Yoga, Music, Performing Arts, DLLE (02)	**22**	
		12	**----**	**02**	**08**	**08**	**10**	**04**	**44**	

* Exit Option: Award of UG Certificate in Major with 40-44 credits and an additional 4 credits core NSQF Course/Internship or Continue with Major and Minor

Level	Sem.	Major		Minor	OE	VSC, SEC (VSEC)	AEC, VEC, IKS	OJT, FP, CEP, CC, RP	Cr	Cumulative Credits
		Mandatory (DSC 1 & DSC 2)	**Electives**							
5.0	III	Advanced Database Management System(03) Data Structures (03) Statistics (02)		Computer Networks (03) Augmented Reality & Virtual Reality(03)	Any ONE 1. Design Thinking 2. Introduction to Stock Markets – Trading, Investments & Automations 3. Personal Financial Planning 4. Social Media Marketing Strategy	VSC: Flutter for beginners	AEC: Hindi/ Marathi/ Gujarati (02)	**FP OR CC:** NSS, NCC, Sports, Cultural, Yoga, Music, Performing Arts, DLLE (02)	**22**	88 (UG Diploma)
	Credits	8		6	2	2	2	2		
	IV	Core Java (03) Software Engineering (03) Research Methodology (02)		Internet of Things (03) Design and Analysis of Algorithms (03)	Any ONE 1. Design Thinking 2. Introduction to Stock Markets – Trading, Investments & Automations 3. Personal Financial Planning 4. Social Media Marketing Strategy (NOTE: Course opted in Sem III cannot be repeated in Sem IV)	VSC: Introduction to C#.Net	AEC: Hindi/ Marathi/ Gujarati (02)	**FP OR CC:** NSS, NCC, Sports, Cultural, Yoga, Music, Performing Arts, DLLE (02)	**22**	
	Credits	8		6	2	2	2	2		
	2nd year	16	0	8	4	4	4	8	44	
	Cum Cr.	28	----	10	12	12	14	12	88	

* Exit Option: Award of UG Diploma in Major and Minor with 80-88 credits and an additional 4 credits core NSQF Course/Internship or Continue with Major and Minor

Level	Sem.	Major		Minor	OE	VSC, SEC (VSEC)	AEC, VEC, IKS	OJT, FP, CEP, CC, RP	Credits	Cumulative Credits
		Mandatory (DSC 1, 2 & DSC 3)	**Electives**							
5.5	V	Building Blocks of AI (04) Optimization Technique (04) Software Project Management (03)	Game Programming (04) OR Ethical Hacking (04)	Web Services (03)	----	**VSC** (02) IIT Spoken Tutorial Programme* (02)	----	**FP/CEP/Holistic Skill Development for Career Readiness** (02)	**22**	132 (UG Degree)
	Credits	**11**	**4**	**3**	**0**	**2**	**0**	**2**		
	VI	Data Network Security (04) Digital Image Processing (04) Software Testing & Quality Assurance (03)	Cloud Computing (04) OR Cyber Forensics (04)	Data Science (03)	----	----	----	**OJT/Internship/ Project Work** (04)	**22**	
	Credits	**11**	**4**	**3**	**0**	**0**	**0**	**4**		
	Total credits in 3rd year	**22**	**8**	**6**	**0**	**2**	**0**	**6**	**44**	
	Cum Cr.								**132**	

* Exit Option: Award of UG Degree in Major with 120-132 credits or Continue with Major and Minor

* IIT Spoken Tutorial Course will be decided by College.

[FP = Field Project; CEP = Community Engagement and Service; OJT = On Job Training – Internship/Apprenticeship]