Shrimathi Devkunvar Nanalal Bhatt Vaishnav College for Women (Autonomous)
Owned and Managed by Cork Industries Charities Trust
Affiliated to University of Madras - Re-Accredited with 'A+' Grade by NAAC
Chromepet Chennai-600044

57 YEARS

DEPARTMENT OF COMPUTER SCIENCE WITH ARTIFICIAL INTELLIGENCE

B.Sc. Computer Science with Artificial Intelligence

CHOICE BASED CREDIT SYSTEM (CBCS)

&

LEARNING OUTCOMES BASED CURRICULUM FRAMEWORK (LOCF)

2023-2026 Batch

B.Sc. Computer Science with Artificial Intelligence

PROGRAMME OUTCOMES (PO)

After completion of the programme, the student will be able to

PO1	Develop sharp cognizance of concepts, apply the domain knowledge with utmost confidence and be assertive at any given opportunity.
PO2	Possess deeper understanding of life skills to appraise life and draw logical conclusions.
PO3	Design and develop solutions for challenging problems of society.
PO4	Acquire programme centric thought process facilitating further studies in the respective domain.
PO5	Engage in life-long learning to easily adapt to the dynamic environment and obtain clarity and preparedness for field specialization.
PO6	Self actualize and self regulate, focusing on ethical and moral values to become a compassionate human being.

PROGRAMME SPECIFIC OUTCOMES (PSO)

The students at the time of graduation will

PSO1	Possess computational knowledge for, new AI-oriented architecture, machine-learning and deep learning models.
PSO2	Be equipped with skills to develop software applications in specialized areas of Computer Science such as Artificial Intelligence, Machine Learning, Robotics, IOT, Gaming, Augmented Reality / Virtual Reality (AR/VR).
PSO3	Make use of AI and ML techniques for industrial applications in the areas of Autonomous Systems, IOT, Cloud Computing, and Robotic process Automation, Natural Language Processing and lead to increased productivity and efficiency in various industries. With advancements in science and research.

B.Sc. Computer Science with Artificial Intelligence

CURRICULUM FRAMEWORK 2023 – 2026 Batch

SEM	PART	COURSE TYPE	COURSE CODE	COURSE TITLE	CREDITS	LECTURE HOURS		CIA	ESE	TOTAL
						TH	PR			
I Year I Semester	I	Foundation	22ULTFC1001/ 22ULHFC1001/ 22ULSFC1001/ 21ULFFC1001	Tamil-I/ Hindi-I/ Sanskrit-I/ French-I	3	6		40	60	100
	II	Foundation	20UGEFC1001	General English- I	3	6		40	60	100
	III	Core Major I	22UAICT1001	Introduction to Artificial Intelligence	4	7		25	75	100
		Core Practical I	22UAICP1001	PROLOG Lab: Practical - I	3		5	40	60	100
		Allied Theory I	22UAIAT1001	Allied I: Mathematics - I	5	6		25	75	100
	IV	Life skill -I	23USSEC1001	Efefctive communication skills	2	-		50	-	50
				TOTAL	**20**					**550**
I Year II Semester	I	Foundation	22ULTFC2002/ 22ULHFC2002/ 22ULSFC2002/ 21ULFFC2002	Tamil-II/ Hindi-II/ Sanskrit-II/ French-II	3	6		40	60	100
	II	Foundation	20UGEFC2002	General English- II	3	6		40	60	100
	III	Core Major II	22UAICT2002	Problem Solving using Python	4	7		25	75	100
		Core Practical II	22UAICP2002	Python Lab: Practical - II	3		5	40	60	100
		Allied Theory II	22UAIAT2002	Allied II: Mathematics - II	5	6		25	75	100
	IV	Life Skill - II	23UUHVE2003	Universal Human Values	2			50	50	100
		Value Education	20UESVE2001	Environmental Studies	2			50	-	50
			20UYGVE2002	Yoga and Wellness	2			50	-	50
				TOTAL	**24**					**700**
II Year	I	Foundation	22ULTFC3003/ 22ULHFC3003/ 22ULSFC3003/ 21ULFFC3003	Tamil-III/ Hindi-III/ Sanskrit-III/ French-III	3	5		40	60	100

Year/Semester	Part	Category	Course Code	Title	Credits	Hours (L)	Hours (P)	Int.	Ext.	Total
III Semester	II	Foundation	20UGEFC3003	General English - III	3	5		40	60	100
	III	Core Major III	22UAICT3003	Java and Data Structures	4	9		25	75	100
		Core Practical III	22UAICP3003	Data structures using Java Lab	3		5	40	60	100
		Allied Theory III	22UAIAT3003	Allied III: Statistics - I	5	6		25	75	100
	IV	Non Major Elective	20U__NE3001	Yet to get bos approval	2			50	-	50
				TOTAL	**20**					**550**
II YEAR IV Semester	I	Foundation	22ULTFC4004/ 22ULHFC4004/ 22ULSFC4004/ 21ULFFC4004	Tamil-IV/ Hindi-IV/ Sanskrit-IV/ French-IV	3	5		40	60	100
	II	Foundation	20UGEFC4004	General English - IV	3	5		40	60	100
	III	Core Major IV	22UAICT4004	Relational Database Management System	4	9		25	75	100
		Core Practical IV	22UAICP4004	PL/SQL Lab	3		5	40	60	100
		Allied Theory IV	22UAIAT4004	Allied IV: Statistics - II	5	6		25	75	100
	IV	Non Major Elective	20U__NE4002	Yet to get bos approval	2			50	-	50
		Life Skill-III	23ULSLM4003	Leadership and Managerial skills	2			50	-	50
		Students Progression Bodies	23USP_4_1	Student Progression Activities	2			50	-	50
				TOTAL	**24**					**650**
III YEAR V SEMESTER	III	Core Major V	22UAICT5005	Operating Systems	4	5		25	75	100
		Core Major VI	22UAICT5006	Computer Networks	5	5		25	75	100
		Core Major VII	22UAICT5007	Computer Vision	4	4		25	75	100
		Core Practical V	22UAICP5005	Computer Vision Lab (Open CV)	3		5	40	60	100
		Elective I – Theory I (Coursera)	24UAIET5A01/ 24UAIET5B01	Mobile Application Development for Machine	5	6		25	75	100

				Learning/ Natural Language Processing						
	III	Elective – I Practical I	24UAIEP5A01/ 24UAIEP5B01	Mobile Application Development for Machine Learning - Lab/ Natural Language Processing - Lab	3		5	40	60	100
	IV	Skill Based Elective	23USSSB5SM3/ 23USSSB5ST3 (B.A., B.SC, &B. VOC)	SWAYAM - MOOC/ NPTEL/ Spoken Tutorials	3	2		50	-	50
		Life Skill -IV	23ULSPF5004	Professional Skilla	2			50	-	50
		Ability Enhancememt-1	23UAE_____	Student Progression Activities	2			-	-	-
				TOTAL	**31**					**700**
III YEAR VI SEMESTER	III	Core Major VIII	22UAICT6008	Cloud Computing	4	5		25	75	100
		Core Major IX	22UAICT6009	Internet of Things	5	5		25	75	100
		Core Major X	22UAICT6010	Machine Learning	4	4		25	75	100
		Core Practical VI	22UAICP6006	Machine Learning Lab	3		5	40	60	100
		Elective II – Theory I (Coursera)	24UAIET6A02/ 24UAIET6B02	Block Chain Technology/ Information Security	5	6		25	75	100
		Elective – I III Project	22UAIPR6001	Elective Mini Project	5		5	40	60	100
	IV	Skill Enhancement	23USSSE6CR4	Coursera	3			50	-	50

			Title	Credits			CIA	ESE	Total
	Ability Enhancement- II	23UAE_____	Title to be assigned by the dept.	2			50	-	50
	Skill Development	233UAD_6001	Add on Courses	2			-	-	-
			TOTAL	**33**					**700**
			TOTAL	**152**			-	-	**3850**
V	Extra Curricular Activity	XSP	Sports	1-5			-	-	-
	Extra Credits	**EDIP**	**Internship**	**2**			-	-	-

NOTE:	ABILITY ENHANCEMENT -1	23UAEQT1001	Quantitative Aptitude	Criteria: Only students those who have completed Quants is eligible to take up ESE

* Spoken Tutorial- LMS course offered from IIT Mumbai

*Coursera– LMS course offered from Coursera Course

Core Electives

List of Courses Offered in V Semester	List of Courses Offered in VI semester
1. Natural Language processing + Lab 2. Mobile Application Development for Machine Learning + Lab **1.** Introduction to Reinforcement Learning + Lab	1. Information Security 2. Network Security 3. Block chain Technology