DEPARTMENT OF COMPUTER SCIENCE

B.Sc Computer Science

CHOICE BASED CREDIT SYSTEM (CBCS)

&

LEARNING OUTCOMES BASED CURRICULUM FRAMEWORK (LOCF)

2023-2026 Batch

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

B.Sc Computer Science

PROGRAMME OUTCOMES (PO)

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

PO1	Develop sharp cognisance 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 specialisation.
PO6	Self-actualise and self-regulate, focussing on ethical and moral values to become a compassionate human being.

PROGRAMME SPECIFIC OUTCOMES (PSO)

The students at the time of graduation will

PSO1	Attain proficiency in computing disciplines to devise efficient digital solutions for real-world challenges.
PSO2	Demonstrate a commitment, dedication to continuous learning and effectively tackle changing challenges in computational fields. Use software engineering principles to create practical solutions for IT Enabled Services (ITES).
PSO3	Promote entrepreneurship, actively engage in research and development to present creative solutions to contemporary challenges, identify areas for further research, and pursue opportunities for advanced education.

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Curriculum 2023-2026

SEM	PART	COURSE COMPONENT	COURSE CODE	TITLE OF THE PAPER	CREDITS	LECTURE HOURS		CIA	ESE	TOTAL
						TH	PR			
I Year I Semester	I	Foundation Course	22ULTFC1001/ 22ULHFC1001/ 22ULSFC1001/ 22ULFFC1001	Tamil-I/ Hindi-I/ Sanskrit-I/ French-I	3	6		40	60	100
	II	English	20UGEFC1001	General English-I	3	6		40	60	100
	III			Bridge Course		15				
		Core Theory-I	23UCSCT1001	Problem solving through Programming in C	3	4		40	60	100
		Core Theory-II	22UCSCT1002	Fundamentals of Digital Computer and Microprocessor (8085)	4	4		40	60	100
		Core Practical-I	21UCSCP1001	C Programming	2		4	40	60	100
		Allied Theory-I	20UCSAT1001	Allied Mathematics-I	5	6		40	60	100
	IV	Soft Skill	23USSLC1001	Effective Communication skills	2	2		50	-	50
				TOTAL	**22**					**650**
I Year II Semester	I	Foundation Course	22ULTFC2002/ 22ULHFC2002/ 22ULSFC2002/ 22ULFFC2002	Tamil-II/ Hindi-II/ Sanskrit-II/ French-II	3	6		40	60	100
	II	English	20UGEFC2002	General English-II	3	6		40	60	100
	III	Core Theory-III	23UCSCT2003	Programming Using Python	3	4		40	60	100
		Core Practical-II	23UCSCP2002	Programming Using Python	2		4	40	60	100
		Core Practical-III	23UCSCP2003	Web Technology – [HTML,JS]	2		4	40	60	100
		Allied Theory-II	20UCSAT2002	Allied Mathematics-II	5	6		40	60	100
	IV	Value Education	20UESVE2001	Environmental Studies	2	1		50	-	50
			20UYGVE2002	Yoga and Wellness	2			50	-	50
			23UUHVE2003	Universal Human Values	2			50	-	50
										750
				TOTAL	**24**					

II Year III Semester	I	Foundation Course	22ULTFC3003/ 22ULHFC3003/ 22ULSFC3003/ 22ULFFC3003	Tamil-III/ Hindi-III/ Sanskrit-III/ French-III	3	5		40	60	100
	II	English	20UGEFC3003	General English-III	3	5		40	60	100
	III	Core Theory-IV	21UCSCT3004	Data structures and Algorithms	3	5		40	60	100
		Core Practical-IV	21UCSCP3004	Data Structures Using Python	2		4	40	60	100
		Core Practical-V	21UCSCP3005	Web Applications Development	3		3	40	60	100
		Allied Theory-III	20UCSAT3003	Statistical Methods and its Application-I	4	6		40	60	100
		Non-Major Elective* Subject Offered to other departments	20UCSND4002 (AIDED) / 20UCSNE4002 (SFS)	Tests of Analytical Reasoning (verbal & Non Verbal)(Aided)/ Principles of Internet(SFS)	2	2		50	-	50
				TOTAL	**20**					**650**
II Year IV Semester	I	Foundation Course	22ULTFC4004/ 22ULHFC4004/ 22ULSFC4004/ 22ULFFC4004	Tamil-IV/ Hindi-IV/ Sanskrit-IV/ French-IV	3	5		40	60	100
	II	English	20UGEFC4004	General English-IV	3	5		40	60	100
	III	Core Theory-V	23UCSCT4005	Programming in Java	3	4		40	60	100
		Core Practical–VI	23UCSCP4006	Programming in Java	2		4	40	60	100
		Core Practical –VII	23UCSCP4007	MySQL - Lab	2		4	40	60	100
		Allied Theory-III	20UCSAT3003	Statistical Methods and its Application-II	4	6		40	60	100
		Allied Practical-I	20UCSAP4001	Statistical Methods and its Application(allied Practical)	2			40	60	100
	IV	**Non-Major Elective*** Subject Offered to other departments	20UCSND4002 (AIDED) / 20UCSNE4002 (SFS)	Tests of Analytical Reasoning (verbal & Non Verbal)(Aided)/ Principles of Internet(SFS)	2	2		50	-	50
		Life Skill-III	23ULSLM4003	Leadership & Managerial Skills	2			50	-	50
		Students Progression Bodies	23USP_4_1		2			50	-	50
				One month Internship	2					

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					TOTAL	25					850
III Year V Semester	III	Core Theory-VI	20UCSCT5006	Operating systems	4	5		40	60	100	
		Core Theory-VII	22UCSCT5007	Data Mining	4	5		40	60	100	
		Core Theory-VIII	22UCSCT5008	Database Management Systems	4	5		40	60	100	
		Core Practical – VIII	23UCSCP5008	Data Analytics Using R	2		4	40	60	100	
		Core Practical – IX	22UCSCP5009	Database Management Systems	2		4	40	60	100	
		Elective Theory–I Blended Learning	24UCSET5A01/ 24UCSET5B01	Cloud Computing/Big Data Analytics	5		5	40	60	100	
	IV	Soft Skill – III Skill based Elective	23USSSB5SM3/	SWAYAM-MOOC/NPTEL/	3			50	-	50	
		Life Skill-IV	23ULSPF5004	Professional skills	2			50	-	50	
		Ability Enhancement-I	23USSSB5ST3	Spoken Tutorial*	2			50	-	50	
				TOTAL	28					750	
III Year VI Semester	III	Core Theory--IX	22UCSCT6009	Computer Networks	4	5		40	60	100	
		Core Theory-X	22UCSCT6010	Software Engineering and Testing	4	5		40	60	100	
		Core Practical-X	22UCSCP6010	Software Testing	2		4	40	60	100	
		Core Practical – XI	22UCSCP6011	Mobile Application Development	3		4	40	60	100	
		Elective Theory – II Blended Learning	24UCSET6A02/ 24UCSET6B02	Cryptography/Image Processing	5		5	40	60	100	
		Elective Project	20UCSPR6001	Mini Project	5		5	40	60	100	
	IV	Soft Skill – IV Skill Enhancement Course	23USSSE6CR4	Coursera*	3		2	50	-	50	
		Ability Enhancement-II	23UAECS6002	Essential of Computing Skill	2			50	-	50	
		Skill Development	23UAD_6001	Add on Courses	2			50	-	50	
	V	Extra-Curricular Activity	XSP	Sports	1			-	-	-	
				TOTAL	31					750	

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				GRAND TOTAL	150					4400

* Spoken Tutorial- LMS course offered from IIT Mumbai
* Coursera– LMS course offered from Coursera

Core Electives

List of Courses Offered in V Semester	List of Courses Offered in VI semester
1. Computer Graphics 2. Resource Management Techniques 3. Cloud Computing 4. Big Data Analytics	5. Digital Commerce 6. Network Security 7. Artificial Intelligence and Machine Learning 8. Block Chain Technology 9. Internet of Things 10. Image Processing 11. Cryptography 12. Analytics for Service Industry