DEPARTMENT OF COMPUTER SCIENCE

B.Sc Computer Science with Data Science

CHOICE BASED CREDIT SYSTEM (CBCS)

&

LEARNING OUTCOMES BASED CURRICULUM FRAMEWORK (LOCF)

2022-2025 Batch

B.Sc Computer Science with Data 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 specialization.
PO6	Self-actualise 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	Acquire the knowledge of Data Analytics, Statistics and Machine learning algorithms.
PSO2	Apply the skills in data science and machine learning tools to solve real time problems.
PSO3	Explore the latest emerging technologies in diverse areas of Computer Science and inculcate the skills for successful career, entrepreneurship and higher studies.

Shrimathi Devkunvar Nanalal Bhatt Vaishnav
College for Women (Autonomous)
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Affiliated to University of Madras - Re-Accredited with 'A+' Grade by NAAC
Chromepet Chennai-600044
57 YEARS

Curriculum 2022-2025

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	Core Theory-I	22UDSCT1001	Introduction to Data Science	4	7		25	75	100
		Core Practical-I	22UDSCP1001	Data Science using Python Lab	3		5	40	60	100
		Allied Theory-I	22UDSAT1001	Allied Mathematics-I	5	6		25	75	100
	IV	Soft Skill	20USSLC1001	Essentials of Language and Communication skills	3	2		50	-	50
				TOTAL	**21**					**550**
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-II	22UDSCT2002	Java and Data Structures	4	7		25	75	100
		Core Practical-II	22UDSCP2002	Data Structures using Java Lab	3		5	40	60	100
		Allied Theory-II	22UDSAT2002	Allied Mathematics-II	5	6		25	75	100
	IV	Value Education	20UESVE2001	Environmental Studies	2	1		50	-	50
			20UYGVE2002	Yoga and Wellness	2			50	-	50
		Soft Skill – II	20USSSP2002	Essentials of spoken and presentation skills	3			50	-	50
				TOTAL	**25**					**650**

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Sem	Part	Course	Code	Title	Credit	Hrs	Hrs	CIA	ESE	Total
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-III	22UDSCT3003	Relational Database Management System	4	9		25	75	100
		Core Practical-III	22UDSCP3003	PL/SQL Lab	3		5	40	60	100
		Allied Theory-III	22UDSAT3003	Allied Statistics-I	5		6	25	75	100
		Non-Major Elective* Offered to other departments	20U__NE3001	Yet to get bos approval	2	2		50	-	50
				TOTAL	**20**					**550**
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-IV	22UDSCT4004	Data Analytics	4	9		25	75	100
		Core Practical –IV	22UDSCP4004	Data Analytics Lab	3		5	40	60	100
		Allied Theory-IV	22UDSAT4004	Allied Statistics-II	5	6		25	75	100
	IV	**Non-Major Elective* Offered to other departments**	20U__NE4002	Yet to get bos approval	2	2		50	-	50
				One month Internship	**2**					
				TOTAL	**22**					**550**
III Year V Sem	III	Core Theory-V	22UDSCT5005	Operating systems	4	5		25	75	100
		Core Theory-VI	22UDSCT5006	Computer Networks	5	5		25	75	100
		Core Theory-VII	22UDSCT5007	Data Visualization	4	4		25	75	100

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ester		Core Practical – V	22UDSCP5005	Data Visualization Lab	3		5	40	60	100
		Elective Theory– I Blended learning	24UDSET5A01/ 24UDSET5B01	Mobile Application Development for Machine Learning/ Natural Language Processing	5	6		25	75	100
		Elective Practical– I	24UDSEP5A01/ 24UDSEP5B01	Mobile Application Development for Machine Learning-Lab/ Natural Language Processing-Lab	3		5	40	60	100
	IV	Soft Skill – III Skill based Elective	24USSSB5GT3	Spoken Tutorial*	3	2		50	-	50
				TOTAL	**27**					**650**
III Year VI Semester	III	Core Theory--VIII	22UDSCT6008	Cloud Computing	4	5		25	75	100
		Core Theory-IX	22UDSCT6009	Internet Of Things	5	5		25	75	100
		Core Theory-X	22UDSCT6010	Machine Learning	4	4		25	75	100
		Core Practical – VI	22UDSCP6006	Machine Learning Lab	3		5	40	60	100
		Elective Theory – II Blended learning	24UDSET6A02/ 24UDSET6B02	Block chain Technology/ Information Security	5	6		25	75	100
		Elective Project	22UDSPR6001	Mini Project	5		5	40	60	100
	IV	Soft Skill – IV Skill Enhancement Course	23USSSE6CR4	Coursera*	3	2		50	-	50
	V	Extra-Curricular Activity	XSP	Sports	1			-	-	-
				TOTAL	**30**					**650**
				GRAND TOTAL	**145**					**3600**

* 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 **3.** Introduction to Reinforcement Learning + Lab	1. Information Security 2. Network Security 3. Block chain Technology