



**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



**PG DEPARTMENT OF COMPUTER SCIENCE**

**MSc COMPUTER SCIENCE**

**CHOICE BASED CREDIT SYSTEM (CBCS)**

**&**

**LEARNING OUTCOMES BASED CURRICULUM FRAMEWORK (LOCF)**

**2025-2027 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



## PROGRAMME OUTCOMES (PO)

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

<b>PO1</b>	Identify and analyze the complex problems reaching substantiated conclusions using domain knowledge
<b>PO2</b>	Apply investigative research, specialize in problem identification, formulate research design, utilise analytical tools, draw valid inferences and provide suggestions leading to nation building initiatives.
<b>PO3</b>	Strengthen professional ethics and career planning with systematic building of intrapersonal and interpersonal skills to participate in the intellectual diasporas.
<b>PO4</b>	Establish oneself as a self-reliant, empowered individual to have an inclusive, healthy and compassionate understanding towards life and society.
<b>PO5</b>	Equipped with technical / managerial expertise to innovate and critically analyze various attributes which constitute pivotal issues in a multidisciplinary scenario.
<b>PO6</b>	Emerge as innovators and pioneers to create new avenues of employment catering to the global trends as well as demands.

## PROGRAMME SPECIFIC OUTCOMES (PSO)

The students at the time of graduation will

<b>PSO1</b>	Acquire the fundamental knowledge for professional software development
<b>PSO2</b>	Develop the skills necessary to support their career in software development, web development, databases and entrepreneurship in recent trends like data analytics, artificial intelligence, Image processing, Networking, Embedded systems
<b>PSO3</b>	Integrate Computing skills and soft skills to meet the current demand of IT Industry and pursue research in computer science



## MSc Computer Science

### CURRICULUM FRAMEWORK 2025 – 2027 Batch

SEM	PART	COURSE TYPE	COURSE CODE	COURSE TITLE	CREDITS	LECTURE HOURS		CIA	ESE	TOTAL	
						TH	P				
I Year	I	Core Paper-I	25PCSCT1001	Theory of Computation	3	6		40	60	100	
	I	Core Paper-II	25PCSCT1002	Data Science using Python	4	6		40	60	100	
	I	Core Paper-III	25PCSCT1003	Full Stack Web Development	4	6		40	60	100	
	I	Core Practical-I	25PCSCP1001	Practical-I: Data Science using Python Lab	2		4	40	60	100	
	I	Core Practical-II	23PCSCP1002	Practical-II: Full Stack Web Development	2		4	40	60	100	
	I	Elective Theory-I	25PCSETM101	Any one from the list of Electives (Theory)	3	4		40	60	100	
	II	Skill Based Electives	25PSECS1001	CyberSecurity	3			50		100	
				<b>TOTAL</b>	<b>21</b>					<b>700</b>	
I Year	II Semester	I	Core Paper-IV	25PCSCT2004	Deep Learning Techniques	4	5		40	60	100
		I	Core Paper-V	25PCSCT2005	Image and Video Analytics	4	5		40	60	100
		I	Core Paper-VI	25PCSCT2006	Federated Learning	3	4		40	60	100
		I	Core Practical-III	25PCSCP2003	Practical-III: Deep Learning Techniques Lab	2		4	40	60	100
		I	Core Practical-IV	25PCSCP2004	Practical-IV: Image and Video Analytics Lab	2		4	40	60	100
		I	Elective Practical - I	23PCSEP2001	Any one from the list of Electives (Practical)	3		4	40	60	100
		I	Elective Theory-II	25PCSETSA06	Any one from the list of Electives (Theory)	3	4		40	60	100
		II	Soft Skill	18MOOC2002	Swayam- Mooc	4			50		100



# 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



				<b>TOTAL</b>	<b>25</b>					<b>800</b>	
<b>II year</b>	<b>III Semester</b>	I	Core Paper-VII	GenAI and LLM	4	5		40	60	100	
		I	Core Paper-VIII	Cloud Analytics	4	5		40	60	100	
		I	Core Paper-IX	Optimization Algorithms	3	4		40	60	100	
		I	Core Practical-V	Practical-V: GenAI and LLM Lab	2		4	40	60	100	
		I	Core Practical-VI	Practical-VI: Cloud Analytics Lab	2		4	40	60	100	
		I	Elective Theory-III	Any one from the list of Electives (Theory)	3	3		40	60	100	
		I	Elective Practical - II	Any one from the list of Electives (Practicals)	3		4	40	60	100	
		II	Skill Based Electives	18PSSRS3003	Research Skills	3			50		100
		II	Internship	17PCSIP3001		2			50		100
				<b>TOTAL</b>	<b>26</b>					<b>900</b>	
<b>II Year</b>	<b>IV Semester</b>	I	Core Practical-VII	Case Study Practical-1	3		5	40	60	100	
			Core Practical-VIII	Case Study Practical-2	3		5	40	60	100	
			Core Project	20PCSPR4001	Project & Viva-Voce	9		20	50	150	200
			Soft Skill	23PSECR4004	Coursera	4			40	60	100
				<b>TOTAL</b>	<b>19</b>					<b>500</b>	
				<b>GRAND TOTAL</b>	<b>91</b>					<b>2900</b>	



# 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



## Core Electives

List of Electives: Group – I (Theory)	List of Electives: Group – II (Practical)
<ol style="list-style-type: none"><li>1. Modern Artificial Intelligence</li><li>2. Soft Computing</li><li>3. Quantum Computing</li><li>4. Cryptography and Cyber Security</li><li>5. Ethical Hacking</li><li>6. Social Media Analytics</li><li>7. Bio-Inspired Computing</li><li>8. Linguistics Computing</li><li>9. Augmented Reality and Virtual Reality</li><li>10. Cryptocurrency and Block Chain Technology</li><li>11. Explainable AI</li></ol>	<ol style="list-style-type: none"><li>1. “R” Programming</li><li>2. Weka Tool</li><li>3. Natural Language Processing Tool Kit</li><li>4. Mobile Application Development</li><li>5. Testing and Automation</li><li>6. Devops</li><li>7. Embedded Systems and IOT</li><li>8. Robotic Process Automation</li><li>9. Microsoft Azure Fundamentals</li><li>10. Business Intelligence</li></ol>