



**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 CHEMISTRY**

**M.Sc., Chemistry**

**CHOICE BASED CREDIT SYSTEM (CBCS)**

**&**

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

**Batch 2022-2024**



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### PROGRAMME OUTCOMES (PO)

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

<b>PO 1</b>	To identify and analyze the complex problem searching substantiated conclusions domain knowledge
<b>PO 2</b>	To apply investigative research, specialize in problem identification , formulate research design , utilize analytical tools , draw valid inferences and provide suggestions leading to nation building initiatives .
<b>PO 3</b>	To strengthen professional ethics and career planning with systematic building of intrapersonal and interpersonal skills to participate in the intellectual diasporas .
<b>PO 4</b>	To establish oneself as a self - reliant, empowered individual for an inclusive , healthy and compassionate understanding towards life and society .
<b>PO 5</b>	To equip with technical / managerial expertise to innovate and critically analyze various attributes which constitute pivotal issues in a multidisciplinary scenario .
<b>PO 6</b>	To 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>	Build up a broad knowledge, understanding of advanced concepts and execute critical thinking in different areas of Chemistry and also in interdisciplinary fields.
<b>PSO2</b>	Enhance skills in handling scientific instruments, and interpret analytical data for structure elucidation using characterization techniques.
<b>PSO3</b>	Execute professional skills as chemists, entrepreneurs or in higher education with the available opportunities in the field of research and Industries.



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SE M	PART	COURSE TYPE	COURSE CODE	COURSE TITLE	CRE DITS	HR S	CI A	ES E	TOT AL
I	I	Core Theory I	22PCHCT1001	Basic Principles of Organic Chemistry	4	90	40	60	100
		Core Theory II	22PCHCT1002	Structural Inorganic Chemistry and Photochemistry	4	90	40	60	100
		Core Theory III	22PCHCT1003	Chemical Kinetics and Thermodynamics	4	90	40	60	100
		Elective Theory I	22PCHET1001	Analytical Techniques in Chemistry	3	75	40	60	100
		Core Practical I	22PCHCP1001	Inorganic Chemistry Practical I	4	90	40	60	100
	II	Skill Based Elective	22PSSCS1001	Cyber Security	3		50	---	100
				<b>Total</b>	<b>22</b>				<b>600</b>
II	I	Core Theory IV	22PCHCT2004	Organic Reaction Intermediates and its Mechanism	4	90	40	60	100
		Core Theory V	22PCHCT2005	Co-ordination Chemistry: Bonding, Reaction and Spectra	4	90	40	60	100
		Core Theory VI	22PCHCT2006	Group Theory and Quantum Chemistry	4	90	40	60	100
		Core Practical II	22PCHCP2002	Organic Chemistry-Practical	4	90	40	60	100
		Elective Theory II	22PCHET2002	Heterocyclics and Natural Products	3	75	40	60	100
	II	Soft skill	18MOOC2002	SWAYAM (MOOC)	4		50	---	100
				<b>Total</b>	<b>23</b>				<b>600</b>
III	I	Core Theory VII	22PCHCT3007	Retro synthetic Analysis and Pericyclic Reactions	4	90	40	60	100
		Core Theory VIII	22PCHCT3008	Molecular Spectroscopy and its Applications	4	90	40	60	100
		Core Theory IX	22PCHCT3009	Electro and Computational Chemistry	4	90	40	60	100
		Core Practical III	22PCHCP3003	Physical Chemistry Practical	4	90	40	60	100
		Elective Theory III	22PCHET3003	Green Chemistry and Sustainable Development	3	75	40	60	100
		Skill Based Elective	18PSSRS3003	Research Skills	3		50	---	100
	II	Internship	17PCSIP3001	Internship	2		40	60	100
				<b>Total</b>	<b>24</b>				<b>700</b>



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IV	I	Core Theory X	22PCHCT4010	Advanced Inorganic Chemistry	4	90	40	60	100
		Elective Theory IV	22PCHET4004	Research Methodology	3	75	40	60	100
		Elective Theory V	22PCHET4005	Introduction to material science	3	75	40	60	100
		Core Practical IV	22PCHCP4003	Inorganic Chemistry Practical II	4	90	40	60	100
		Core Project I	20PCHPR4001	Project	4		40	60	100
		Soft Skill	23PSECR4004	Skill Enhancement –Course era	4		50		100
<b>Total</b>					<b>22</b>				<b>600</b>
<b>Grand Total</b>					<b>91</b>				<b>2500</b>