



**SHRIMATHI DEVKUNVAR NANALAL BHATT
VAISHNAV COLLEGE FOR WOMEN (AUTONOMOUS)**

OWNED AND MANAGED BY CORK INDUSTRIES CHARITIES TRUST
(Affiliated to the University of Madras and Accredited with 'A+' Grade by NAAC)
Chromepet, Chennai - 600 044.

M.Sc Physics

CURRICULUM FRAMEWORK 2025– 2027 Batch

SEM	PART	COURSE TYPE	COURSE CODE	COURSE TITLE	CREDIT	LECTURE HOURS		CIA	ESE	TOTAL
						TH	PR			
I Year	I	CORE THEORY	25PPHCT1001	MATHEMATICAL METHODS IN PHYSICS	4	6		40	60	100
	I	CORE THEORY	20PPHCT1002	CLASSICAL MECHANICS AND RELATIVITY	4	6		40	60	100
	I	CORE THEORY	22PPHCT1003	QUANTUM MECHANICS I	4	6		40	60	100
	I	CORE THEORY	25PPHCT1004	ADVANCED ELECTRONIC CIRCUITS	4	6		40	60	100
	I	CORE PRACTICAL	20PPHCP2001	PRACTICAL I (GENERAL)			3			
	I	CORE PRACTICAL	22PPHCP2002	PRACTICAL II (ELECTRONICS)			3			
	II	SKILL BASED ELECTIVE-1	25PSECS1001	CYBER SECURITY ESSENTIALS	3			50	-	100
				TOTAL	19					500
I Year	I	CORE THEORY	22PPHCT2005	QUANTUM MECHANICS II	4	6		40	60	100
	I	CORE THEORY	25PPHCT2006	ELECTROMAGNETIC THEORY	4	6		40	60	100
	I	CORE THEORY	25PPHCT2007	COMPUTATIONAL METHODS AND PYTHON PROGRAMMING	4	6		40	60	100
	I	CORE ELECTIVE COURSERA	25PPHET2A01 24PPHET2B01	MOLECULAR SPECTROSCOPY AND LASER SCIENCE/ INTRODUCTION TO MOLECULAR SPECTROSCOPY	3	6		40	60	100
	I	CORE PRACTICAL	20PPHCP2001	PRACTICAL I (GENERAL)	4		3	40	60	100



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	I	CORE PRACTICAL	22PPHCP2002	PRACTICAL II (ELECTRONICS)	4		3	40	60	100
	II	SOFT SKILL	18MOOC2002	SWAYAM (MOOC)	4	-		50		100
	II		17PPHIP3001	INTERNSHIP*	2			40	60	100
				TOTAL	29					800
II Year	I	CORE THEORY	25PPHCT3008	STATISTICAL MECHANICS	3	6		40	60	100
	I	CORE THEORY	25PPHCT3009	NUCLEAR AND PARTICLE PHYSICS	3	6		40	60	100
	I	CORE ELECTIVE COURSERA	25PPHET3A02 24PPHET3B02	NANOSCIENCE AND TECHNOLOGY NANOTECHNOLOGY MAKERS COURSE A	3	6		40	60	100
	I	CORE ELECTIVE COURSERA	24PPHET3A03 24PPHET3B03	CRYSTAL PHYSICS CRYSTAL STRUCTURE AND PROPERTIES OF METALS	3	6		40	60	100
	I	CORE PRACTICAL	22PPHCP4003	PRACTICAL III (GENERAL)						
	I	CORE PRACTICAL	25PPHCP4004	PRACTICAL IV(ELECTRONICS)						
	II	SKILL BASED ELECTIVE -	18PSSRS3003	RESEARCH SKILLS	3			50	-	100
				TOTAL	17					600
III Year	I	CORE THEORY	25PPHCT4010	CONDENSED MATTER PHYSICS	4	6		40	60	100



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I	CORE THEORY	25PPHCT4011	RESEARCH METHODOLOGY	2	6				100
II	CORE ELECTIVE	25PPHET4A04	MICROPROCESSOR AND BASICS OF EMBEDDED SYSTEM	3	6		40	60	100
	COURSERA	25PPHET4C04	MICROPROCESSORS AND MICROCONTROLLERS						
II	CORE ELECTIVE	25PPHET4A05	MATERIALS SCIENCE	3	6		40	60	100
	COURSERA	24PPHET4B05	INTRODUCTION TO MATERIALS SCIENCE						
I	CORE PRACTICAL III	22PPHCP4003	PRACTICAL III (GENERAL)	4		3	40	60	100
I	CORE PRACTICAL IV	25PPHCP4004	PRACTICAL IV (ELECTRONICS)	4		3	40	60	100
I	CORE PROJECT	20PPHPR4001	PROJECT VIVA - VOCE	4	6		20	80	100
II	SOFT SKILL	23PSSCR4004	COURSERA	4			50		100
				TOTAL	26				700
TOTAL					91				2600



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SEMESTER	CORE THEORY	ELECTIVE THEORY	CORE PRACTICAL	SKILL BASED ELECTIVE	SOFT SKILL
1	4	-		1	-
2	3 + Part II Internship	1	2	-	1
3	2	2		1	-
4	2+ Project	2	2	-	1

Total Core Theory – 11

Total Core Elective Theory – 5

Total Core Practical – 4