



**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



DEPARTMENT OF UG PHYSICS (AIDED)

B.Sc. PHYSICS

CHOICE BASED CREDIT SYSTEM (CBCS)

&

LEARNING OUTCOMES BASED CURRICULUM FRAMEWORK (LOCF)

2023-2026 Batch



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B.Sc. PHYSICS

CURRICULUM FRAMEWORK 2023–2026 Batch

| S.No | Year/ Semester | Part | Course component | Teaching Hours | | Credits | CIA | ESE | Total |
|------|-----------------------|------|--|----------------|------|---------------------------|-----|-----|-------|
| | | | | Theory | Prac | | | | |
| 1 | I Year I Semester | I | Foundation course (Tamil/Hindi/ Sanskrit) | 6 | | 3 | 40 | 60 | 100 |
| 2 | | II | English | 6 | | 3 | 40 | 60 | 100 |
| 3 | | III | Core theory I Properties of Matter | 5 | | 3 | 40 | 60 | 100 |
| 4 | | III | Core theory II Thermal Physics | 4 | | 3 | 40 | 60 | 100 |
| 5 | | III | Core Practical I | | 3 | Exam at the end of II sem | | | |
| 6 | | III | Allied theory I Chemistry for Physics I | 4 | | 4 | 40 | 60 | 100 |
| 7 | | III | Allied Practical I Allied Chemistry Practical I | | 2 | Exam at the end of II sem | | | |
| 8 | | IV | Soft skill-Essentials of Language and communication Skills | | | 3 | 50 | - | 50 |
| 9 | I Year II Semester | I | Foundation course (Tamil/Hindi/ Sanskrit) | 6 | | 3 | 40 | 60 | 100 |
| 10 | | II | English | 6 | | 3 | 40 | 60 | 100 |
| 11 | | III | Core theory III Acoustics & Thermodynamics | 5 | | 3 | 40 | 60 | 100 |
| 12 | | III | Core theory IV Mechanics | 4 | | 3 | 40 | 60 | 100 |
| 13 | | III | Core Practical I | | 3 | 2 | 40 | 60 | 100 |
| 14 | | III | Allied theory II Chemistry for Physics II | 4 | | 4 | 40 | 60 | 100 |
| 15 | | III | Allied Practical I Allied Chemistry Practical I | | 2 | 2 | 40 | 60 | 100 |



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|----|----------------------------|-----|---|---|---|---------------------------|----|----|-----|
| 16 | | IV | Soft Skills - Essentials of spoken and presentation skills | | | 3 | 50 | - | 50 |
| 17 | | IV | Value education Environmental studies | | | 2 | 50 | - | 50 |
| | | | Yoga and wellness | | | 2 | 50 | - | 50 |
| 18 | II Year III Semester | I | Foundation course (Tamil/Hindi/ Sanskrit) | 6 | | 3 | 40 | 60 | 100 |
| 19 | | II | English | 6 | | 3 | 40 | 60 | 100 |
| 20 | | III | Core theory V Mathematical Physics & Statistical Mechanics | 5 | | 4 | 40 | 60 | 100 |
| 21 | | III | Core theory VI Optics and spectroscopy | 4 | | 4 | 40 | 60 | 100 |
| 22 | | III | Core Practical II | | 3 | Exam at the end of IV Sem | | | |
| 23 | | III | Allied theory III Allied Mathematics I | 4 | | 5 | 40 | 60 | 100 |
| 24 | | IV | NON MAJOR ELECTIVE Medical physics | 1 | | 2 | 50 | - | 50 |
| 25 | II Year IV Semester | I | Foundation course (Tamil/Hindi/ Sanskrit) | 6 | | 3 | 40 | 60 | 100 |
| 26 | | II | English | 6 | | 3 | 40 | 60 | 100 |
| 27 | | III | Core theory VII Atomic Physics | 4 | | 4 | 40 | 60 | 100 |
| 28 | | III | Core theory VIII Electricity and Magnetism | 5 | | 4 | 40 | 60 | 100 |



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|----|---------------------------|-----|--|---|---|---------------------------|----|----|-----|
| 29 | | III | Core Practical II | | 3 | 2 | 40 | 60 | 100 |
| 30 | | III | Allied theory IV Allied Mathematics II | 4 | | 5 | 40 | 60 | 100 |
| 31 | | IV | Non major elective Medical physics | 1 | | 2 | 50 | - | 50 |
| 32 | III Year V Semester | III | Core theory IX Electromagnetism | 5 | | 4 | 40 | 60 | 100 |
| 33 | | III | Core theory X Fundamentals Of Nanoscience And Nanotechnology | 5 | | 4 | 40 | 60 | 100 |
| 34 | | III | Core theory XI Nuclear Physics | 5 | | 4 | 40 | 60 | 100 |
| 35 | | III | Elective Theory I (Blended Learning) Digital Data Processing And Embedded Microcontrollers/Cour sera | 5 | | 5 | 40 | 60 | 100 |
| 36 | | III | Elective Project I | | 4 | 5 | 40 | 60 | 100 |
| | | III | Core Practical III Genera | | 2 | Exam at the end of IV Sem | | | |
| | | III | Core Practical IV Electronics | | 2 | Exam at the end of IV Sem | | | |
| | | III | Elective Practical I Microprocessor | | 2 | Exam at the end of IV Sem | | | |
| 37 | | IV | Skill Based Elective Swayam- | | | 3 | 50 | - | 50 |



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|----|----------------------------|-----|---|---|---|-----------------------------|----|----|-----|
| | | | MOOC/NPTEL | | | | | | |
| 38 | III Year VI Semester | III | Core theory XII Relativity And Quantum Mechanics | 6 | | 4 | 40 | 60 | 100 |
| 39 | | III | Core theory XIII Solid State Physics | 6 | | 4 | 40 | 60 | 100 |
| 40 | | III | Core theory XIV Integrated Electronics | 6 | | 4 | 40 | 60 | 100 |
| 41 | | III | Core Practical III General | | 3 | 2 | 40 | 60 | 100 |
| 42 | | III | Core Practical IV Electronics | | 3 | 2 | 40 | 60 | 100 |
| 43 | | III | Elective Practical I(Blended Learning) Microprocessor practical/Coursera | | 3 | 5 | 40 | 60 | 100 |
| 44 | | IV | Skill Enhancement Coursera | | | 3 | 50 | | 50 |
| 45 | | V | Extracurricular activity | | | 1 | | | |
| | | | | | | 140 Cred its | | | |