



Shikshak Sanchalit Shikshan Sanstha's  
**DR. SHANTILAL DHANJI DEVSEY ARTS COLLEGE AND  
COMMERCE AND SCIENCE COLLEGE, WADA. TAL- WADA; DIST-  
PALGHAR (421303)**



*(AFFILIATED TO UNIVERSITY OF MUMBAI)*

**DEPARTMENT OF PHYSICS**

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**Year (2025-2026)**

**Attainment of Course Outcomes (COs) and Programme Specific Outcomes (PSOs)**

The Department of Physics successfully implemented the revised NEP-2020 curriculum during the academic year 2025–26. The introduction of Major, Minor, Multidisciplinary, Skill Enhancement, and Value Added Courses, along with revised practical syllabi, required significant academic planning and continuous faculty efforts to ensure effective attainment of Course Outcomes (COs) and Programme Specific Outcomes (PSOs).

**Departmental Initiatives for CO and PSO Attainment**

- The revised NEP-2020 curriculum was implemented effectively through structured academic planning, curriculum mapping, and outcome-based teaching methodologies.
- Special orientation programmes were conducted at the beginning of the academic year to familiarize students with the Major–Minor course structure, Academic Bank of Credits (ABC), multiple entry-exit options, and the Choice-Based Credit System (CBCS).
- Additional bridge courses and remedial sessions were organized to strengthen students' understanding of fundamental Physics concepts, enabling them to cope with the revised syllabus and interdisciplinary learning approach.
- The updated practical syllabus was implemented through redesigned laboratory experiments, demonstration-based learning, and hands-on training using modern laboratory equipment and electronic experimental kits.
- Faculty members prepared laboratory manuals, experiment worksheets, digital learning resources, and ICT-based teaching materials aligned with the revised curriculum.

- Students were encouraged to select Physics as a Minor subject by conducting awareness sessions highlighting career opportunities, higher education prospects, competitive examinations, and multidisciplinary applications of Physics.
- Innovative teaching strategies such as experiential learning, project-based learning, inquiry-based learning, peer learning, and simulation-based demonstrations were adopted to enhance conceptual understanding and practical competence.
- Laboratory training emphasized precision measurements, experimental design, data analysis, scientific report writing, and safe laboratory practices to improve practical skills and scientific temperament.
- Faculty mentors continuously monitored students' academic progress through mentoring sessions, assignments, laboratory performance, quizzes, tutorials, and remedial coaching, thereby improving student participation and learning outcomes.
- Continuous Internal Evaluation (CIE) was strengthened through class tests, practical examinations, viva-voce, seminars, assignments, presentations, and project work to ensure effective measurement of Course Outcome attainment.
- Students were encouraged to undertake mini-projects, interdisciplinary assignments, model preparation, and scientific demonstrations that promoted innovation, creativity, problem-solving ability, and research aptitude.
- ICT-enabled teaching tools, virtual laboratories, multimedia presentations, simulation software, and online learning resources were extensively used to support blended and outcome-based learning.
- Career guidance programmes, higher education counselling, competitive examination coaching, entrepreneurship awareness, and placement-related activities were organized to improve employability and lifelong learning competencies.
- Continuous analysis of student performance, feedback from stakeholders, and CO–PSO attainment reports enabled the department to implement corrective measures for continuous quality improvement.

### **Outcome**

The collective efforts of the faculty members resulted in improved student participation, better conceptual understanding, enhanced laboratory competencies, increased enrolment in Physics

Minor courses, improved academic performance, and higher attainment of Course Outcomes (COs) and Programme Specific Outcomes (PSOs). The successful implementation of the revised NEP-2020 curriculum has strengthened students' scientific knowledge, practical skills, multidisciplinary learning, research orientation, and employability, while aligning the department with the objectives of the National Education Policy (NEP) 2020.

This version is suitable for NAAC SSR (2025), AQAR 2025–26, Academic Audit, IQAC reports, and University Department Annual Reports, and specifically reflects the NEP-2020 Major–Minor curriculum changes and revised practical syllabus.

| Sr. No. | Method of Course attainment                 | Tolls used for Attainment                                                                                |
|---------|---------------------------------------------|----------------------------------------------------------------------------------------------------------|
| 1       | Use of Models and components in Electronics | PCB, Bread Boards, Capacitors, Diodes, Transistors, Electronic Circuits like Multivibrators, Timers, ict |
| 2       | Devices used in Electronics                 | CRO, Function Generators, Frequency meters, Voltmeters, Ammeters.                                        |
| 3       | Equipment's and Tools used in Mechanics     | Katers Pendulum, Metal Bobs, Vernier callipers, Scales, Micrometre Screw Gauge, Fly Wheels.              |
| 4       | Equipment's and Tools used in optics        | Spectrometers, lenses, prisms like Calcite, Double Refracting Prisms, Slits, Bi-prisms.                  |

  
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