



॥ विद्या विनयेन शोभते ॥

Janardan Bhagat Shikshan Prasarak Sanstha's

**CHANGU KANA THAKUR**

**ARTS, COMMERCE AND SCIENCE COLLEGE, NEW PANVEL  
(AUTONOMOUS)**

Re-accredited 'A+' Grade by NAAC (3<sup>rd</sup> Cycle - CGPA 3.61)

'College with Potential for Excellence' Status Awarded by UGC

'Best College Award' by University of Mumbai

## Department of Physics

### ➤ Establishment of Department:

The Department of Physics was established in 1997 with the founder Ex-Principal Dr.B.R.Choudhary as its first head of Department of Physics. Department runs Physics course at F.Y & S.Y level, Remedial course in Basic Physics and Certificate Course in Basic Biophysics in collaboration with the Department of Botany & Zoology. In 2023-24, Department of Physics offered Certificate course in Fundamentals in Arduino for SYBSC learners

### ➤ Infrastructure and learning resources available :

The Department of Physics is provided with a well equipped infrastructure of main laboratory, faculty room & Dark room with a good number of instruments so that individual students get to handle those instruments. The department has provided an LCD projector to show Science Movie Video clips.

### ➤ Activities of the department:

With broader vision 'To build sound academic foundation of students aspiring to pursue a career in the arena of Physics', Department of Physics has set up goals to stimulate learners desire to apply their knowledge to practical life, to grasp the principles of Physics, to knowledge of the subjects. To achieve these goals the Department of Physics conducts various activities like Quiz Competition, Seminars by students, Awareness programs about conventional & nonconventional sources and Guest lectures involving our physics students. Functional MOU was made between department of Physics, M.PASC College and CKThakur college. Under Faculty exchange programme, Dr. G.S.Gund gave informative lecture on crystal Physics and Nanotechnology to CKT Physics learners. The department of Physics carries mentoring of learners by personal counseling, Remedial Coaching, Departmental Assignments, Departmental Tests, Avishkar Experimental Work, N.S.S. Survey Projects, Poster & Model Competitions The Department of Physics always provides the platform to the students to develop the skills like leadership, problem solving ability by making them participate in various intercollegiate events/competitions. Various prizes at intercollegiate level were bagged

by learners. Mr. Haresh Gegad bagged the best Poster in the National Level Seminar on Explore Physics .2 students were selected for University round in Avishkar Research Convention.8 students won first prize in intercollegiate level Debate, Quiz, Circuit Express, Treasure hunt competition organised by different college Ms. Pranali S. Ahire got first prize in online National level Essay competition in 2023. Ms. Sanjivani U. Patil Photo essay was selected at National level top 10 in 2022

In the tenure of these 25 years, the Department of Physics had successfully conducted Two Days UGC sponsored State Level Seminar on ‘Astrophysics, Cosmology & Gravitation on 6th & 7th February 2010 for benefiting college teachers participants & students by creating awareness & appreciation for historical views of cosmology . On 23rd December 2013, Department of Physics also successfully steered the National Level Seminar on ‘EXPLORE PHYSICS’ which was also a UGC Grant rupees 62,000/-. This Seminar was focused on the advancement and application of knowledge of Physics to disseminate information in the field of Physics by paper presentation . In this Seminar 74 delegates, 11 oral paper presentations, 16 poster paper presentations were benefitted.

Department of Physics on 28th March, 2022 carried out Two Days Workshop on “Training of Solar based devices” in collaboration with IQAC under RUSA aegis to cultivate the skill of basic technique of soldering, assembling the parts of Solar study Lamp & create awareness and sensitize about nonrenewable resources solar Energy.86 Learners took benefit of this workshop and acquired expertise in the skills like basic technique of soldering, screwing the components of solar study lamp. This activity was carried out for 2022-23 onwards. As social responsibility about helping tribal people, creating awareness among tribal people about usage of Solar Energy and its devices, 50 Study Solar Lamp assembled by college learners were distributed to tribal villagers of Chichwadi village, Aushichiwadi, Taluka Panvel,

The Department of Physics has successfully organized Mega ISRO Exhibition Space on 4,5 January, 2019. With help of 5 Senior Scientists from Vikram Sarabai Space Centre, Ahmedabad, different models of space craft, its history were displayed.60 Physics F.Y.BSc & S.YBSC learners spontaneously participated in it as volunteers for its smooth organization 15,000 school students enjoyed the exhibition.

The Department of Physics has been fruitfully carrying out Extension Activities like APDL ( Appreciating Physics in Daily Life ) since 2006-07 which was initiated by Vidnyan Parishad, Navi Mumbai in 2006-07. This activity is targeted to create interest in physics by demonstrating simple experiments which are the applications of physics in School students' day-to-day life. Till date we have covered up 3 schools in urban areas and 19 schools in rural areas benefiting 3025 students.

With an objective to develop hands-on training Approach, Robotics Workshop conducted by “Technoseed” in 2017 where 25 learners F.Y.B.Sc & S.Y.B.Sc of our college participated. On 2nd October, 2019 ,55 learners, Solar Ambassador workshop in collaboration with IIT, Mumbai was organized by the Department with emphasis on providing learners skill development, hands-on training in assembly of Solar study lamps.

Educational visits to IIG, Kalamboli, IUCAA (Pune), Ghatghar Power station, Nehru Planetarium (Powai), Solar Industry (Nashik), electron beam centre Kharghar are also arranged by the Department of Physics for learners to provide an opportunity for learners to see and experience real world

The Department of Physics is involved in the environmental conscious aspect by looking after the Grid system Solar Panel setup installed on the College rooftop. Mrs. G.U. Patil has published 03 Research papers in UGC listed journal, 02 Research papers in peer Reviewed Journals ,04 Research papers in non peer Reviewed Journals, 04 Papers Published in Conference Proceedings, attended seminar and workshop at 3 International, 15 National, 20 State & 27 University level. Mr. S.S. Kamble authored 2 Books for BSc learners. He has published 03 Research papers in peer Reviewed Journals, 04 Research papers in non-peer Reviewed Journal. He has attended 3 International level, 2 National level and 12 University level Seminars.RUSA project of grant 1,05,000/- Rs. titled “Detection of toxic gases in an environment by using nano-sized materials” was sanctioned to Mr.S.S.Kamble.1,70,000/- TIPL project was sanctioned to Mrs. G.U.Patil.