Who Can Apply

- Involved in teaching undergraduate/ postgraduate/higher secondary courses in STEM disciplines.
- Interested in integrating programming and simulations into their curriculum.
- Seeking to update their skills with modern computational approaches for research and pedagogy.
- Participation in this FDP will be beneficial for Career Advancement Scheme (CAS) requirements.

Registration Details

- Registration fee- Rs. 1000/-
- Limited to 30 participants.

How to Register

- The registration form must be filled on or before 22nd November 2025 by 6pm.
- To register use the link below https://forms.gle/SxNXU4yofVY4DnV49 or scan QR code given below.
- A payment link will be emailed after registration. Your participation will be confirmed once the payment is received.

Certification

- Certification criteria: minimum of 80% attendance and completion of assignments.

scan to register

Patrons

Shri. Bhushan K. Savaikar
Director, Directorate of Higher Education, Goa

Dr. Aldina Braganza
Officiating Principal , Carmel College of Arts, Science and Commerce for Women, Goa
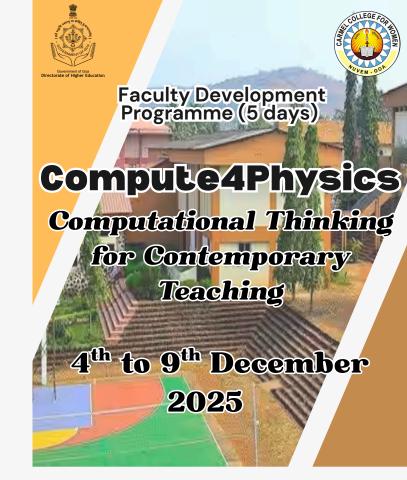
Co-ordinator

Mr. Virroy Dias
Assistant Professor, Dept. of Physics, Carmel College of Arts, Science and Commerce for Women, Goa

Resource Persons

- **Dr. Kunal Korgaonkar,**
  BITS Goa, Confluences of Computing

- **Dr. Ashim Nandi,**
  IIT Goa, Computational Quantum Chemistry

- **Dr. Bhargav Alavani,**
  Goa University, Taleigao, Computational Physics

- **Dr. Ashish Desai,**
  Chowgule College, Margao, Computational Quantum Mechanics

CARMEL COLLEGE FOR WOMEN
NUVEM - GOA

Faculty Development Programme (5 days)

Compute4Physics
Computational Thinking for Contemporary Teaching

4th to 9th December 2025

organized by
Department of Physics
Carmel College of Arts, Science and Commerce for Women, Nuvem Goa

supported by
Directorate of Higher Education (DHE), Govt. of Goa, Porvorim Goa

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About College

Carmel College of Arts, Science and Commerce for Women, nestled at the foothills of Nuvem, Goa, is the state's first and only higher education institute exclusively for women. Established in 1964, it is managed by the Sisters of the Apostolic Carmel Congregation, founded by Venerable Mother Mary Veronica of the Passion in 1868 in France and established in India in 1870.

The college was founded through the efforts of Mother Theodosia A.C., Sr. Amabel A.C., and Monsignor Ronald Knox. Its 32-acre campus was generously donated by Dona Thelma da Costa Lourenco, who wished to make higher education accessible to girls from Nuvem and nearby villages, sparing them the need to travel to Mumbai for studies.

Having completed six decades of service in 2024, Carmel College continues to empower women by balancing academic excellence with employability, fostering feminist leadership, promoting environmental awareness, and embracing innovation and technology in education.

About Physics Department

Established in 1964, the Department of Physics is one of the oldest at Carmel College. It promotes scientific curiosity and critical thinking through hands-on learning and dedicated teaching. Many graduates have excelled academically, securing university ranks and pursuing higher studies at prestigious institutions in India and abroad. The department has also received research grants from UGC–DAE and GSRF, Govt. of Goa, reflecting its commitment to excellence and innovation.

About the Program

- The Compute4Physics program is designed to empower educators with computational tools and techniques that align with the National Education Policy (NEP) 2020.

- Integrates simulation, coding, and data-driven approaches, this program equips faculty members with the essential skills to bring computation into both teaching and research.

Objectives of FDP

- **Empowers state educators with tools like Python, Mathematica, and simulation platforms, making them proficient in solving complex problems and designing interactive experiments.**

- **Prepares state educators to guide Goan students towards careers in quantum science, in line with the National Quantum Mission (NQM).**

- **Directly supports NEP 2020's emphasis on experiential learning and interdisciplinary education, helping the state implement transformative pedagogical practices in STEM fields.**

Outline of FDP

- **Introduction to Python & Mathematica** *(theory + hands-on).*
- **Quantum Mechanics overview** – *theory and computational problem solving.*
- **Applied Computational Quantum Chemistry.**
- **Hands-on Quantum Computing -** *using real quantum hardware.*
- ***Generative AI tools for teaching.***

Qiskit

Scilab

NumPy