



**MALAVIYA MISSION TEACHER TRAINING CENTRE (MMTTC)**  
*(Formerly UGC-Human Resource Development Centre)*  
**Pt. Ravishankar Shukla University, Raipur-492 010**

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**Refresher Course**  
**in**  
**Computational Science**  
**(September 09 to 23, 2024)**

**Programme Highlights:**

Computational science is a rapidly growing interdisciplinary field and is applied in diverse scientific research areas. There are many problems in physics, chemistry, biology, mathematics, electronics and statistics that cannot be sufficiently studied experimentally or theoretically. Computer simulation is an indispensable part of research on understanding phenomena at molecular level. This is used to understand, analyze, and improve not only science but engineering problems too. Computational science is used not only to understand the existing problems but is also used to predict new materials, new molecules, new devices etc. The main purpose of this refresher course is to provide an in-depth and up-to-date knowledge on various simulation techniques to explore theoretical and computational research. Special emphasis will be given on density functional theory (DFT), Molecular dynamics, Monte Carlo methods, scientific visualization, and statistical processing of big data sets.

**Objectives:**

The course will have two parts: 45 h of thematic lectures by resource persons, and 27 h of other activities, like Microteaching, Project Work, Seminar and Demonstration of advanced equipment's facility. Above activities will highlight creative and innovative practices in teaching and research. There will be assessment exercises and activities as part of the progression of the course. Moreover, a MCQ based examination at the end of the course will also be conducted. All the participants who will complete the refresher course successfully will get certificate with gradation.

**Who Should Attend?**

All regular / part time / ad hoc / contract teachers of faculties of Different disciplines like Physics, Chemistry, Computer Science, Mathematics, Electronics and Statistics in the Universities/ Colleges that are included under section 2 (f) of the UGC act. The teachers of the colleges affiliated to the University for at least five years can also participate.

**Registration Process:**

- Link for **online application**: Malaviya Mission Centre (MMC) portal, <https://mmc.ugc.ac.in/>
- No **registration fee**.
- **Number of Participants**: Minimum 40 and Maximum 50 on first come first serve basis.
- **Mode of Delivery**: Offline Mode (Residential)

**Contact Persons:**

Prof. Preeti. K. Suresh, Programme Director, MMTTC

Prof. Kallol K. Ghosh, Course Coordinator (9425216204)

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