

REFRESHER & PREPARATIVE WINTER SCHOOL (RPWS)

4 - 22 December 2025



Target Participants: Ph.D. Aspirants

(Preparing for national exams like NET, GATE, JGEEBILS, JEST, etc.)

♦ **Last Date: 31st July 2025**

Venue:
IISER Thiruvananthapuram

- ✦ Accommodation, food & registration are all free!
- ✦ The selected candidates need to cover only their travel!

**REGISTER
NOW**

Facilities - IISER Thiruvananthapuram



Labs

Facilities



NMR



Single Crystal XRD



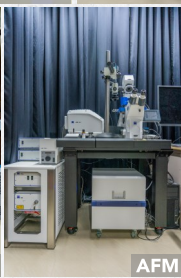
TEM



XRD



XPS



AFM



SEM



Hostels

The Refresher and Preparative Winter School in Biology (RPWS-Bio) is designed to engage students in an active exploration of core concepts in contemporary biology, with a strong emphasis on research based learning. The program offers a blend of interactive lectures, exposure to research environments, and discussions aimed at broadening scientific perspective. It is intended for students aspiring to pursue advanced research after their Master's studies.



INTAKE: 50 Students

Free Online Registration

REGISTER
NOW



rpwsbio@iisertvm.ac.in



ELIGIBILITY:

Final Year of M.Sc. & Integrated BS-MS in Biological Sciences & Allied Subjects.



TOPICS

- ◆ Cellular Organization
- ◆ Developmental Biology
- ◆ Inheritance Biology
- ◆ Ecological Principles
- ◆ Evolution and Behaviour
- ◆ Methods in Biology - Computational
- ◆ Cell Communication and Signaling - Basics
- ◆ Cell Communication and Signaling - Host parasite interaction
- ◆ Cell Communication and Signaling - Innate and adaptive immune system
- ◆ Fundamental Process
- ◆ Biochemistry
- ◆ Neurobiology
- ◆ System Physiology - Plant
- ◆ System Physiology - Animal
- ◆ Methods in Biology - Experimental

SCHOOL OF BIOLOGY

The Refresher and Preparative Winter School in Chemistry (RPWS-Chem) aims to inspire young minds in scientific thinking by bridging textbook fundamentals with cutting-edge research. This intensive program will offer students the chance to learn foundational and advanced topics in organic, inorganic, physical, and theoretical chemistry directly from subject experts. It will also introduce key concepts in translational research, especially in chemical biology and medicinal chemistry. Through interactive sessions, the Winter School will help students build strong conceptual understanding, sharpen logical thinking, and strengthen their problem-solving abilities in research. The program will also guide students on various academic and career opportunities available after postgraduate studies. Based on academic performance, the School will select fifty students from across the country to join this enriching experience.



INTAKE: 50 Students



rpwschm@iisertvm.ac.in



ELIGIBILITY:

Final Year of M.Sc. & Integrated BS-MS in Chemical Sciences & Allied Subjects.



TOPICS

- ♦ Quantum Chemistry
- ♦ Principles and Applications of Spectroscopy
- ♦ Electrochemistry
- ♦ Chemical and Statistical Thermodynamics
- ♦ Chemical Kinetics
- ♦ Mathematical Methods for Chemists and Data Analysis
- ♦ Heterocyclic Chemistry
- ♦ Materials and Solid State Chemistry
- ♦ General Organic Chemistry
- ♦ Symmetry and Group Theory
- ♦ Chemistry of Natural Products
- ♦ Coordination and Bioinorganic Chemistry
- ♦ Pericyclic and Photochemistry
- ♦ Structural Determination of Organic and Inorganic compounds
- ♦ Principles of Stereochemistry
- ♦ Organometallic Chemistry
- ♦ Main Group Chemistry

Free Online Registration

REGISTER NOW

SCHOOL OF CHEMISTRY



The Refresher and Preparative Winter School in Physics

(RPWS-Phy) is specially designed for highly motivated students at the Master's level, and aims to instill the fundamental concepts of Physics through problem-solving exercises. Additionally, it offers insights into the state-of-the-art research activities in the field and prospective avenues for future exploration.



HIGHLIGHTS:

- ◆ Comprehension, reasoning and problem solving in physics
- ◆ Exposure to cutting-edge international research
- ◆ Discussions on opportunities after masters



INTAKE: 50 Students

Free Online Registration

REGISTER
NOW



rpwsphy@iisertvm.ac.in



ELIGIBILITY:

Final Year of M.Sc. & Integrated BS-MS in Physical Sciences & Allied Subjects.



TOPICS

- | | |
|----------------------------|--|
| ◆ Mathematical Methods | ◆ Thermodynamics and Statistical Physics |
| ◆ Classical Mechanics | ◆ Electronics and Experimental Methods |
| ◆ Electromagnetic Theory | ◆ Atomic and Molecular Physics |
| ◆ Quantum Mechanics | ◆ Nuclear and Particle Physics |
| ◆ Condensed Matter Physics | ◆ Experimental Demonstrations |



Glimpse of RPWS 2022 - 2024



REFRESHER & PREPARATIVE WINTER SCHOOL (RPWS)

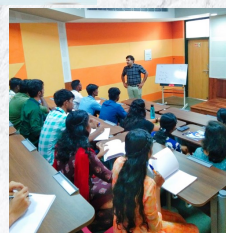
4 - 21 December 2024



Winter School 2024



Interaction



Classes



Facility Visit



Achievements of RPWS Alumni (PhD Positions)

- ◆ NIT Trichy
- ◆ VIT Vellore
- ◆ NIT Calicut
- ◆ SRM University, Chennai
- ◆ PES University, Bangalore
- ◆ IISER Thiruvananthapuram
- ◆ Karnataka University, Dharwad
- ◆ University of Missouri, United States
- ◆ National Institute of Virology, Pune
- ◆ Central Agricultural University, Manipur
- ◆ Jaume I University, Castelló de la Plana, Spain
- ◆ National Taipei University of Technology, Taiwan
- ◆ Manipal Academy of Higher Education, Karnataka
- ◆ Chettinad Academy of Research and Education, Chennai
- ◆ Centre for DNA Fingerprinting and Diagnostics, Hyderabad