

### Resource Persons

Guest speakers from different national and international reputed organizations.

### Eligibility

Teachers/faculties/researchers in Physics, Chemistry, Biology, Material Science and Engineering, and other relevant branches, etc. who are in continuous service in India.

### Registration Fee

Nil

### Mode of Event

Online

### Online Registration

The registration form can be found in the link below and should be filled up online on or before **5<sup>th</sup> February 2021**.

[https://docs.google.com/forms/d/e/1FAIpQLScXIBI0QT M16\\_puONJtPkIsgH-m1N8zjel5TO519Z8N1oMqjA/viewform?usp=pp\\_url](https://docs.google.com/forms/d/e/1FAIpQLScXIBI0QT M16_puONJtPkIsgH-m1N8zjel5TO519Z8N1oMqjA/viewform?usp=pp_url)

E-certificate shall be issued on successful completion of the course.

### Local Advisory Committee

Director, IIT(ISM) Dhanbad

Dean (R&D), IIT(ISM) Dhanbad

Coordinator, TEQIP-III, IIT(ISM) Dhanbad

HOD, Physics, IIT(ISM) Dhanbad

### Course Co-ordinators

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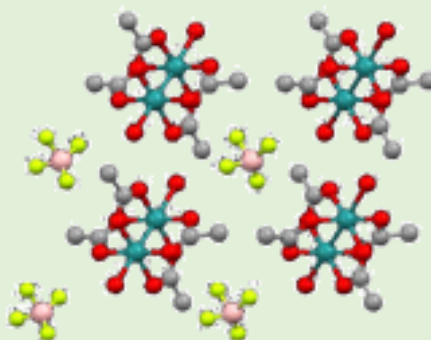
### Student Volunteers

#### Mr. Rudranarayan Khatua

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#### Mr. Nitesh Kumar Pathak

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# Short-term Training Course in Physics

(A Physics Refresher Course with Special Focus on Material Science and Biophysics)

Under

**TEQIP-III**

**(February 8<sup>th</sup> – February 20<sup>th</sup>, 2021)**

Venue: IIT (ISM) Dhanbad



Organized by

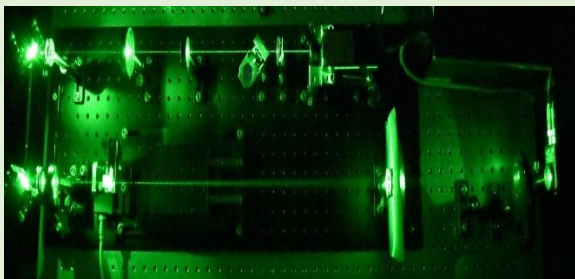
DEPARTMENT OF PHYSICS  
INDIAN INSTITUTE OF TECHNOLOGY  
(INDIAN SCHOOL OF MINES)  
DHANBAD-826004, JHARKHAND, INDIA  
<https://www.iitism.ac.in>

## About Indian Institute of Technology (Indian School Mines) Dhanbad



Indian Institute of Technology (Indian School of Mines) Dhanbad is a fully residential technical institute having all modern facilities located in the mineral-rich belt of India in the major cooking coal city of Dhanbad, Jharkhand, India. It was established as ISM in 1926 on the lines of the Royal School of Mines, London.

IIT (ISM) Dhanbad, an Institute of National importance, has been rendering invaluable service to the cause of global education and societal development in its nine long decades of existence. Keeping in tune with the changing times a need has been realized for further expansion and diversification. IIT (ISM) has grown into a full-fledged technical institution with 18 departments offering a wide range of courses in Engineering, Science, Management, Humanities and Social Sciences at UG, PG and Ph.D. levels. IIT (ISM) admits students through National level Entrance Examinations in various courses of the respective Departments.



## Aim of the Programme

The course aimed to stimulate the interest of young early-career teachers/faculties/researchers in the fields of physics primarily material science and biophysics, from different parts of the country as well as to provide them with a platform to learn the latest developments in the field. This programme will focus on developing an understanding of material science and biophysics (including Physics, Chemistry, Material Science and Engineering, and Biology, etc.) and facilitate knowledge-sharing among scientists in these fields. This interactive and training-based programme will help the participants acquire state-of-the-art knowledge in advanced research fields in physics from experts of reputed national and international organizations.

## Highlights

- Training program for the entry-level teachers/faculties/researchers will be planned so that the person who enters the college/university/institute is sensitized to his/her roles and responsibilities in their respective organizations.
- To propagate the state-of-the-art knowledge in material science and biophysics.
- Raising the quality of teaching and research in colleges/universities/institutes.
- Demonstrating the computational and experimental techniques used in various research areas of physics.
- Familiarizing different aspects of research such as manuscript preparation, publications, collaborations, etc.

## Programme Contents

The Programme will focus on:

- Nanomaterials & Nanotechnology
- Organic Semiconductors
- Hydrogen storage materials
- Solar Cells
- Topological Materials
- Superconductivity
- Computational Material Science
- Quantum Chemistry
- Atomic and Molecular Spectroscopy
- Fluorescence Spectroscopy
- Optical and Magnetic tweezers
- Optoelectronic and Photonic Devices
- Soft-condensed Matter Physics
- Laser and Nonlinear Optics
- Microscopy
- Protein Dynamics & Neurodegenerative Diseases
- Biomedical Imaging
- Virus Dynamics
- Molecular docking and Molecular Dynamics Simulation

