

**Karyashala**

The goal of "KARYASHALA" is to give students, chiefly from research and academic institutions, practical learning experience in handling/troubleshooting of high-end scientific instruments and other such skill development on topics needed for research work. The programme is designed to assist motivated researchers who have a strong desire to achieve success in their pursuits of scientific and technical research.

**Course Details**

This workshop will revolve around acquainting the enthusiastic participants with advanced analytical instruments such as Gas Chromatography, High-Performance Liquid Chromatography, UV-visible Spectrophotometer, Scanning Electron Microscopy and Confocal Microscopy required for varying applications such as therapeutic, nano-biotechnology and environmental engineering. This active learning and training workshop is designed to provide theoretical and practical knowledge of handling photosynthetic microbes in laboratories along with the working of high-end instruments by expert researchers and scientists from premier organisations in India.

**Course Topics**

- ▶ Microbial isolation and identification (Microalgae, cyanobacteria and purple-bacteria)
- ▶ Algal Cultivation systems in photo-bioreactors and open ponds
- ▶ Genomic DNA isolation and alkali lysis buffer methods
- ▶ Characterisation and analysis of biomass and bio-products
  - Light microscopy, confocal laser scanning microscopy and scanning electron microscopy for structural analysis of microorganisms
  - Chromatography techniques (GC-MS and HPLC)
  - Spectroscopy based approaches (UV-Visible and FTIR spectroscopy)

**Who Can Apply**

Undergraduate, postgraduate students, early career researchers and faculties from academic institutions in India. The event will be physically conducted at IIT Indore.

**Important Dates**

- Last date of Application: **20<sup>th</sup> November 2022**
- List of selected candidates will be announced on: **21<sup>st</sup> November 2022**
- Workshop dates: **12<sup>th</sup> - 17<sup>th</sup> December 2022**

**About IIT Indore**

Indian Institute of Technology Indore (IIT Indore) is a prestigious institution in the state of Madhya Pradesh, established in 2009. The Department of Biosciences and Biomedical Engineering (BSBE) at IIT Indore applies scientific and engineering approaches to advance fundamental understanding and applications in biology and biomedical engineering. The mission of BSBE is to have an international influence, develop future leaders in the field of biosciences and bioengineering, and foster an environment conducive to the successful pursuit of academic activities in research and education.

**Course Faculty**

Dr. Kiran Bala  
Associate Professor,  
Department of BSBE,  
IIT Indore



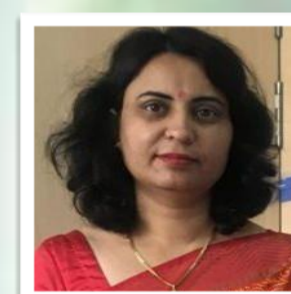
Dr. Hem Chandra Jha  
Associate Professor,  
Department of BSBE,  
IIT Indore



Dr. Parasharam M. Shirage  
Professor,  
Department of MEMS,  
IIT Indore



Dr. Abhijeet Joshi  
Associate Professor,  
Department of BSBE,  
IIT Indore



Dr. Pritam Sangwan  
Scientist E & Joint Director  
Centre for Fire, Explosive &  
Environment Safety (CFEES),  
DRDO, New Delhi



Dr. Hamendra S. Parmar  
Assistant Professor,  
School of Biotechnology,  
DAVV, Indore

**How To Apply**

Applicants can fill the google form available by clicking on the below link or may proceed by scanning the following QR code:

<https://forms.gle/9Jv3FCUqbZEB13cr8>



For further updates please visit:

<https://sites.google.com/view/aetsiiti/karyashala-2022>

Course Registration Fees: **INR 500/-**

Course Coordinator: **Dr. Kiran Bala**

For any queries please contact:

Dr. Tonmoy Ghosh or Dr. Atreyee Ghosh

Email ID: [algalecotech@gmail.com](mailto:algalecotech@gmail.com)