

### About NIT Jalandhar

Dr B R Ambedkar National Institute of Technology Jalandhar is amongst the 20 NITs established by Ministry of HRD, Government of India. The institute came into existence in the year 1988 (earlier Regional Engineering College Jalandhar) and obtained the status "Institute of National Importance" by Act of Parliament 2007. The institute is offering B.Tech program in various disciplines like Computer Science and Engineering, Electronics and Communication Engineering, Instrumentation and Control Engineering, Mechanical Engineering, Civil Engineering, Textile Technology, Biotechnology, Chemical Engineering, and Industrial & Production Engineering. In addition to B.Tech programs, the institute offers M.Sc. programs in Physics, Chemistry and Mathematics, M.Tech programs in all Engineering departments, and PhD programs.



### Vision

To build a rich intellectual potential embedded with interdisciplinary knowledge, human values and professional ethics among the youth, aspirant of becoming scientists, engineers and technologists so that they contribute to society and create a niche for a successful career.

### Mission

To become a leading and a unique institution of higher learning, offering state-of-the art education, research and training in science, engineering and technology to students who are able and eager to become change agents for the industrial and economic progress of the nation. To nurture and sustain an academic ambience conducive to the development and growth of committed professionals for sustainable development of the nation and to accomplish its integration into the global economy.

### Organizing Committee

#### Chief Patron

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#### Convenor

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## 5-Days Hands on Workshop and Training on Triple-Quad ICP-MS, FESEM, EDS and EBSD Analysis

12<sup>th</sup>-16<sup>th</sup> September 2022

### Convenor

**Dr. Raman Bedi**

### Coordinators

**Dr. Vickram Jeet Singh**

**Dr. Anjireddy Bhavanam**

**Dr. Sathiya S**



### Organized by

**Institute Instrumentation Center (IIC)**  
Dr B R Ambedkar National Institute of Technology  
Jalandhar-144011 Punjab

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### About the Workshop

The 5-Days Hands on Workshop and Training on “Triple-Quad ICP-MS, FE-SEM, EDS and EBSD Analysis” will be organized to impart knowledge on material characterization techniques and heavy metal analysis. The course is designed to highlight microscopic techniques for surface morphology, surface analysis, molecular structure and characterization. In addition, workshop will also include the training sessions on Triple quad Inductively Coupled Plasma Mass Spectrometry (ICP-MS) techniques. The course will cultivate the brain storming for the insightful research in material science for technological applications of functional materials. Fast track heavy metal analysis and environmental waste analysis technique using ICPMS. The course is designed for students, researchers, and teachers to focus on fundamentals and applications of characterization/analysis techniques. Following topics will be covered:

- Triple Q-ICP-MS/Ms for challenging elemental & speciation workflow
- Surface morphology and characterization
- Electron back scattering diffraction analysis (EBSD)
- Basics and applications of FE-SEM
- Energy-dispersive X-ray spectroscopy (EDS)
- Inductively Coupled Plasma Mass Spectrometry
- Heavy metal analysis
- Environmental sample analysis

The main objectives of the course are:

1. To highlight the importance of material characterization.
2. To provide knowledge regarding various microscopic techniques used for material characterization.
3. To provide insight knowledge on fundamentals and applications of TQ-ICPMS-LC techniques.
4. Role of metal analysis for development and application of biocompatible materials.
5. To develop analytical and creative thinking needed for research.

### Who can attend the Workshop?

Industry professionals/ Faculty members/ research scholars/ students can attend the workshop..

### Registration details

The registration fee for participants is Rs 500/- per participant (internal) and Rs 590/- per participant (external, including 18 % GST). Interested participants may kindly register and pay fee from the Registration link provided on or before **11<sup>th</sup> September 2022**.

### Confirmation of Participation

After the last date of registration, participants will be sent confirmation of their participation in workshop through email. Single registration to attend all sessions. Prior registration is mandatory to attend workshop. Certificate will be issued to the participants on successful participation of the course.. All the lectures of the workshop will be delivered in the morning session followed by offline hands-on training in evening session. Accommodation for the external participants will be provided in the campus on payment basis as per the availability of rooms.

### About the Institute Instrumentation Centre (IIC)

Institute Instrumentation Center has been established with an aim to provide high end research facilities to faculty/students/research scholars of the institute. The analytical facilities of IIC are also extended to the students, researchers and faculty members of other Institutes and Organizations of the country as well. Collaboration with Industries on R & D and Consultancy Projects are also welcome by the Institute. Institute Instrumentation Centre aims to -

- Provide facilities for characterization, high- resolution imaging and precision chemical analysis of different kinds of materials.
- Dissipate knowledge and experience in the above through short-term courses/seminar/workshops etc.

### Workshop Collaborators



### For Registration and Payment



**Scan QR code for registration  
Or  
Click the below link**

[https://www.nitj.ac.in/events\\_registration/iic\\_workshop/login](https://www.nitj.ac.in/events_registration/iic_workshop/login)

**For any queries, please contact**

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