



Guru Jambheshwar University of Science & Technology, Hisar

'A+' Grade NAAC Accredited State Govt. University
(Established by State Legislature Act 17 of 1995)



"Comprehensive Hands-On Workshop on NMR and HPLC Techniques"

18th-20th December, 2024

REGISTRATION: Please fill Google form

Deadline 10th December, 2024

ORGANIZED BY:

Dr. APJ Abdul Kalam Central Instrumentation Laboratory (CIL)

Chief-Patron

Prof. Narsi Ram Bishnoi, Vice-Chancellor, GJUST, Hisar

Patron

Prof. Vinod Chhokar, Registrar, GJUST, Hisar

Convener

Prof. Munish Ahuja, Director, CIL

Organizing Secretary

Prof. C P Kaushik, Deputy Director, CIL

Prof. Manish Kumar, Deputy Director, CIL

Limited
Seats!

About the University

Guru Jambheshwar University of Science & Technology, located in Hisar, Haryana, stands as a beacon of academic excellence since its establishment in 1995. With a keen focus on emerging fields like technology, pharmacy, environmental studies, and management, the university provides a conducive environment for research and learning. Spread over 372 acres in Hisar, Haryana, it offers picturesque landscapes and modern facilities. Accredited 'A+' by NAAC, it ranks well globally and domestically, notably in NIRF and Times Higher Education rankings. With accolades for sustainability and social initiatives, the university fosters interdisciplinary collaboration and research culture. The University has a vibrant and robust research culture, with faculty members actively engaged in interdisciplinary collaboration and innovative projects, which is evident by more than 4689 research papers published in reputed journals with citations of >100000 in Scopus and h-index of 128.

About the Dr. APJ Abdul Kalam Central Instrumentation Laboratory (CIL)

The Dr. APJ Abdul Kalam Central Instrumentation Laboratory (CIL), situated within the vibrant campus of Guru Jambheshwar University of Science & Technology, Hisar, has been a pivotal hub for pioneering research endeavors since its establishment in 2000. Spanning 7212 sq. ft., this state-of-the-art laboratory serves as a catalyst for scientific innovation in the fields of Science, Technology, and Engineering. Equipped with cutting-edge facilities, the laboratory boasts a range of sophisticated instruments, acquired over the years through significant funding initiatives. Instruments such as LC-MS, XRD, Confocal Raman Microscope, Rheometer, FT-IR, and MW Synthesizer were procured under the DST PURSE program, while NMR Spectrometer, FESEM, MP-AES, DSC, UHPLC, and Flash Chromatograph were funded by MHRD/UGC. These modern amenities have facilitated transformative research experiences for scholars from over 103 academic institutions nationwide. Notably, the laboratory goes beyond sample testing, conducting comprehensive training programs to enhance the skills of research scholars and technical staff, thereby fostering a culture of continuous learning and scientific excellence.



Dates: 18th -20th December, 2024

Batch-Specific Training: 15 participants per instrument

Objectives: This workshop aims to-

1. Provide hands-on intensive instrument specific training in handling of Nuclear Magnetic Resonance (NMR) spectrometer or High-Performance Liquid Chromatograph (HPLC).
2. Equip participants with the skills for data interpretation, analysis, and troubleshooting.
3. Teach method development and optimization for HPLC and enable understanding of advanced NMR data interpretation techniques.
4. Impart practical knowledge essential for academic and industrial research in analytical sciences.
5. Develop confidence in operating sophisticated instruments and applying analytical methods to solve research challenges.

Eligibility: Postgraduate (PG) students and PhD scholars pursuing degrees in Chemistry, Biotechnology, Food Technology, Forensic Science, Environmental Sciences, Life Sciences, Pharmaceutical Sciences and any related field.

Topics to be Covered

Module 1: Nuclear Magnetic Resonance (NMR) Spectroscopy

1. Principles and instrumentation of NMR.
2. Sample preparation and handling.
3. Setting up experiments and running spectra.
4. Data interpretation:
 - o Chemical shifts, coupling constants, and integration.
 - o Identification of molecular structures using advanced techniques (2D NMR, etc.).
5. Troubleshooting and optimization in NMR analysis.

Module 2: High-Performance Liquid Chromatography (HPLC)

1. Introduction to HPLC: Instrument components and their functions.
2. Mobile phase selection and gradient programming.
3. Sample preparation and injection techniques.
4. Method development and validation.
5. Data analysis and troubleshooting: Understanding chromatograms and resolving common issues.
6. Advanced techniques: UHPLC, gradient elution.

Workshop Features

- Comprehensive theoretical sessions by experts.
- Hands-on training with NMR and HPLC equipment.
- Interactive Q&A sessions for personalized guidance.
- Small batches of 15 students per instrument to ensure intensive learning.

Registration Fees

- **PG and Ph.D scholars: INR 3,500** | **Industry Professionals: INR 5,000**
(Fees include training material, tea and lunch during the workshop days)

Registration Procedure

Interested Participants are required to fill the Google form for registration by 10th December 2024. Only Selected Participants will be notified telephonically/E-mail to submit the Registration Fees through online mode.

For further details, visit website – www.gjust.ac.in or contact:

Director,

Dr. APJ Abdul Kalam Central Instrumentation Laboratory,

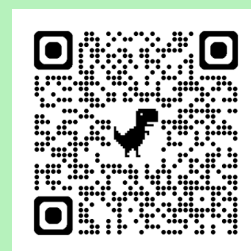
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<https://forms.gle/z4XzthCU5NQXn3WX8>



Click Link or Scan the QR Code for Registration