



विज्ञान एवं प्रौद्योगिकी विभाग
DEPARTMENT OF
SCIENCE & TECHNOLOGY

NATIONAL INSTITUTE OF TECHNOLOGY WARANGAL

Warangal - 506 004, Telangana

Synergistic Training Program Utilizing the Scientific and Technological Infrastructure (STUTI)

Call for Registration and Participation

Training Program on R&D Equipment

Theme: Learning the Technology and Applications of DST Sponsored Advanced Instruments

Program Dates: 28th July – 03rd August 2022

Revised Dates: 22nd – 28th August 2022

Venue: Pt. Ravishankar Shukla University

Register before: 17th July 2022

Register before: 31st July 2022



Scan to Register

No Registration Fee

Click to Register: <https://forms.gle/D7ZkUBheYWKgF4s76>

Objectives of the Program:

- To enable the participants to understand the principles, applications, and hands-on experience on sophisticated analytical instruments.
- To gain knowledge about the in-depth analysis of the characterization techniques using high-end analytical instruments.
- To interact with eminent professors/scientists/ industrial research personnel and discuss real-time research and make collaborations.
- To encourage the participants to utilize the facilities and enhance the research temper.
- To create a research-friendly atmosphere by letting the creative minds of the country exchange ideas and share their knowledge among their fellow participants.

Eligibility Criteria:

- Persons of Indian origin.
- Faculty / Scientists / Post-Doc Fellows / Ph.D. Fellows / Industry Persons / M.Sc. students/ MTech. students who are actively involved in research and development (R&D) in the fields of Chemistry, Physics, Instrumentation, or any relevant area.
- Not more than 3 participants from one institution per training program will be allowed.

Important Instruction:

- Fill in the prescribed bio-data form attached with this brochure and get it endorsed by the head of the institution. And keep the scanned copy ready, which needs to be uploaded during registration.

Organized by

Pt. Ravishankar Shukla University, Raipur (Spoke), NIT Warangal (Hub)

Funded by

DST, Govt of India

Instruments covered for training:

- TD-GC-MS-ECD-FID
- AAS
- XRD
- HPLC
- NMR
- Ion-Chromatography

About Pt. Ravishankar Shukla University, Raipur:

Pt. Ravishankar Shukla University (PRSU), established in 1964, is the largest and the oldest academic institution of Chhattisgarh state. The PRSU has 300 acres sprawling campus and grown enormously over the last 53 years in terms of number of students (approx. 2 lakhs) as well as disciplines, viz., arts, science, life science, humanities, law, education, pharmacy, management, physical education, etc. 27 Schools of Studies and around 150 affiliated colleges spread over different districts of Chhattisgarh. It has been accredited with “A” grade by NAAC.

About NIT Warangal:

National Institute of Technology Warangal, formerly known as Regional Engineering College, was established in 1959. Over the years it has developed into a premier institute of higher learning and is ranked among the top technical education institutions in India. There are 14 Departments offering eight undergraduate, 35 post-graduate programs and guiding 952 PhD scholars besides post-doctoral programs. About 6864 students across the country including international students’ study on the campus. It is a fully residential campus spread across 250 acres with excellent infrastructure in the form of state-of-the-art library, seminar halls, guest houses and research laboratories.

STUTI Team:

Patron

Prof. KL Verma,
Vice-Chancellor, Pt Ravishankar Shukla University, Raipur

Chairman

Prof. N. V. Ramana Rao,
Director, NIT Warangal

Co-Chairman

Prof. V. Rajeswar Rao,
Dean (R&C), NIT Warangal

Convenor

Prof. Kallol K Ghosh
Head, SoS in Chemistry, Pt Ravishankar Shukla University

Principal Investigator

Prof. N. Narasaiah,
Dept. of Metallurgy and Material Engineering

Coordinator

Prof. Shamsh Pervez,
Chairman, BoS Chemistry & PI, SERB Project EMR/2015/000928

Dr. T K Sai,
Principal Scientific Officer, CRIF, NITW & Co-PI, STUTI

Program Coordinators

Dr Indrapal Karbhal
Asst. Professor, PRSU

Sri Harish Madupu
Technical Officer, CRIF, NIT Warangal

Note:

The shortlisted candidates will be intimated through mail. All the selected participants have to submit the uploaded bio-data form physically for the confirmation of participation.

Non-local participants are eligible for boarding/ lodging at NITW on single/double sharing basis subject to availability of accommodation.

For domestic travel of participants, the reimbursement for train/bus tickets is allowed as per actual up to 3AC fare (for outstation participants only).

Contact Us:

Dr. Indrapal Karbhal
Mob: 8605985169

Sri Harish Madupu
Mob: 7010881253

office_stuti@nitw.ac.in

About STUTI:

The Scheme 'Synergistic Training program Utilizing the Scientific and Technological Infrastructure' (STUTI) is intended to build human resource and its knowledge capacity through open access S&T Infrastructure across the country. As a complement to the various schemes of DST funding for expansion of R&D Infrastructure at academic institutions, STUTI scheme envisions a hands-on training program and sensitization of the state-of-the-art equipment as well as towards sharing while ensuring transparent access of S&T facilities.

Automated Thermal Desorption Gas Chromatography coupled to mass spectrometry (TD-GC-MS/MS)

Make: Thermo Fisher Scientific

Model: GC- Trace 1300 equipped with TSQ DUO MS

Analysis/Application: Qualitative and quantitative analysis of VOCs and Semi-VOCs and Organics using three different detectors MS/MS, FID and ECD.



Atomic Absorption Spectrophotometer (AAS)

Make: Thermo Fisher Scientific, UK) with Hydride generation

Model: iCE-3000

Analysis/Application: Ni, Cd, V, Cu, Sn, Co, Cr, Al, Fe, As, Mn, Mo, Hg, Zn, Pb, Sb, Na, K, Li, Ca

Three approaches are attached with AAS: 1) Vapor generator for AS and Hg, flame mode and graphite furnace

High Performance Liquid Chromatography (HPLC)

Make: Thermo Fisher Scientific, USA

Model: HPG-3200SD

Analysis/Application: Separate a mixture of compounds, Vitamins, Proteins, biomolecules etc.



Ion Chromatography

Make: Thermo Fisher Scientific, UK

Model: Dionex 2000

Analysis/Application: Anions (e.g., fluoride, chloride, nitrate, sulfate and phosphate); and cations (e.g., ammonium, sodium, magnesium, potassium, and calcium)



Nuclear Magnetic Resonance (NMR)

Make: Bruker

Model: ASCEND 400

Analysis/Application: Molecular structure of a material to be analyzed by observing and measuring the interaction of nuclear spins. (Organic, inorganic compounds, plant extract etc.)

X-ray diffraction (XRD)

Make: BRUKER

Model: D2 PHASER

Analysis/Application: Crystalline phase, orientation and crystallographic information.

