



**PMMNMTT  
Scheme**



*A Six-Day Faculty Development Workshop  
on*

## **Instructional Strategies of Physical Methods in Chemical Analysis with Hands-On Experiments**

**2<sup>nd</sup> – 7<sup>th</sup> March, 2020**

**Call for Registration and Participation**

### **Coordinators**

**Dr. Raghu Chitta  
Dr. Jugun P. Chinta  
Prof. K. Laxma Reddy (TLC)**

### **Organized by the**

**Department of Chemistry  
in association with the  
Teaching Learning Centre  
National Institute of Technology  
Warangal -506004  
Telangana State, India**



### **Overview of the Workshop:**

As every material that is either natural or man-made is composed of certain degree of chemicals, Chemistry has been acclaimed as the central science of production of materials that have wide and potent applications in Environment, Health, and Energy. As every material that reaches the human society, either directly or indirectly, should be structurally elucidated and composition has to be analyzed, physical methods of qualitative and quantitative chemical analysis have been effectively utilized to unravel the molecular structure, deduce the structural integrity, and probe the structure-functional relationships for sustainable applications. In regard to this, Principles and Applications of Instrumental Techniques comprised of atomic and molecular spectroscopic methods, surface analytical methods, electro-analytical techniques etc. have become the integral part of the higher education in Chemistry, Physics, and Biology. Materials Science, and corresponding areas of Engineering and Technical Education. The new generation of teachers in Chemical Sciences and other allied areas of sciences and technology look for the thorough understanding of the theory and experimental aspects of these modern analytical techniques by way of hands-on experience. This workshop provides a unique platform to learn the concepts of basic principles and applications of analytical techniques from fundamental to advanced level. The workshop is also aimed at imparting the pedagogical approach and skills in teaching physical methods of chemical analysis effectively and lucidly.

### **Objectives of the Workshop:**

- To enable the participants to learn the basic principles and recent developments of spectroscopic methods, surface analytical methods, electro analytical techniques.
- To enable the participants to understand the functioning of some of the instruments that are useful in the pedagogic and higher level teaching.
- To provide hands-on experience to the participants by performing the experiments and also analyzing the obtained results.
- To enhance and strengthen the teaching skills in physical methods of chemical analysis at UG and PG levels.

### **Topics in the Workshop:**

*Principles, Hands-On Experiments and Interpretation of*

- UV-visible and Fluorescence Spectroscopies
- FT-IR and Raman Spectroscopies
- <sup>1</sup>H and <sup>13</sup>C NMR
- Thermo-gravimetric analysis
- GC-MS and LC-MS
- Electron Spin Resonance Spectroscopy
- ICP-OES
- Conductometry, Potentiometry, pH metry and Electrogravimetry

### **Resource Persons:**

Scientists and Faculty from reputed R&D laboratories and Universities who are well recognized in their field of research and teaching. Also, faculty from NIT Warangal and Academic Staff of TLC will deliver lectures and demonstrate some experiments in the laboratory. The list of likely resource persons is given below

1. Prof. C. Pulla Rao, IIT Tirupathi
2. Prof. Ch. Subramanyam, IIT Hyderabad
3. Prof. M. Vithal, Osmania University
4. Prof. N. Venkatasubba Naidu, S. V. University
5. Dr. L. Giribabu, Senior Scientist, ICT Hyderabad
6. Dr. A. Veera Reddy, Suven Life Sciences Ltd., Hyderabad
7. Prof. A. Ramachandraiah, Coordinator, TLC
8. Prof. K. Laxma Reddy, Dept. of Chemistry, NITW
9. Prof. V. Rajeswar Rao, Dept. of Chemistry, NITW
10. Prof. K. V. Gobi, Dept. of Chemistry, NITW
11. Prof. P. V. Srilakshmi, Dept. of Chemistry, NITW
12. Dr. Vishnu Shanker, Dept. of Chemistry, NITW
13. Dr. D. Kashinath, Dept. of Chemistry, NITW
14. Dr. Venkatathri N., Dept. of Chemistry, NITW
15. Dr. B. Srinivas, Dept. of Chemistry, NITW
16. Dr. K. Hariprasad, Dept. of Chemistry, NITW

### **Registration is open to:**

- Science Faculty working in Universities, Degree and PG Colleges and Technical Education Institutes
- Chemical Engg., Materials and Metallurgical Engg., Biotechnology, Civil Engg, etc, Faculty working in Technical Education Institutes
- Research Scholars and Post-Graduate Students Aspiring for Faculty Positions and R&D Scientists
- Analysts, Quality Control and R&D Scientists of R&D Laboratories and Industries

### **How to Apply:**

Eligible candidates may apply by submitting the scanned copy of the filled-in Registration Form (attached with this mail/ brochure) along with **scanned copy of the DD / Proof of remittance of the requisite registration fee** (with transaction number if online transaction) by Email to: [ispmca2020@gmail.com](mailto:ispmca2020@gmail.com) on or before **22<sup>nd</sup> Feb., 2020**.

### **Accommodation:**

Accommodation for the outstation participants will be provided upon request in the Institute visitors Block or Students Hostels, subject to availability and as per the

**Registration Fee:**

Category of Participants	Local Participants	Residential Participants (with Accommodation, and Boarding)
Faculty	Rs. 750/-	Rs. 1500/-
Research Scholars	Rs. 400/-	Rs. 800/-

(Working Lunch will be provided for all participants on all the days of the Workshop)

**Note:** Registration fee for Faculty and Research Scholars of SC/ST category is half of the amounts mentioned above as applicable.

Registration fee may be sent in the form of a DD or remitted through On-line / NEFT to the Bank Account given below. For payment through On-line / NEFT, kindly mention "ISPMCA-2020" in the purpose/remarks column.

Local participants may also pay the registration fee in cash to the Department of Chemistry.

<b>Account Name</b>	DIRECTOR,RESEARCH ACCOUNT,NIT WARANGAL
<b>Account Number</b>	62266262236
<b>Bank</b>	State Bank of India (SBI)
<b>Branch</b>	NIT Warangal Campus
<b>Branch Code</b>	20149
<b>IFSC code</b>	SBIN0020149

**Brief Profile of the Department of Chemistry**

The Department of Chemistry is one of the most active Departments in NIT Warangal with the faculty strength of 18. It offers Engineering Chemistry courses to all B.Tech. programmes and offers a two-year M.Sc. Chemistry Programme with specializations in Organic Chemistry and Analytical Chemistry. It holds the record of producing the largest number of PhDs in the Institute so far. It has a fair number of sophisticated analytical instruments to cater to the needs of research in all areas of chemistry. The Department runs many sponsored research projects and operates the DST-FIST programme. The faculty of the Department publish original research publications in leading international and national journals of very high impact factor. Scores of National and International seminars, conferences and workshops are periodically organized by the Department including GIAN and TLC Workshops.

**About NIT Warangal**

The National Institute of Technology Warangal, formerly known as Regional Engineering College was established in 1959 with foundation Stone laid by Pandit Jawaharlal Nehru. 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 and 31 post-graduate programmes besides doctoral programmes. About 6000 students across the country and about 1000 international students study on the campus. It is a fully residential campus sprawling over 250 acres with excellent infrastructure in the form of state of the art Central Library, Computer Centre, Innovation Centre, Auditorium and Seminar Halls, Central Instruments Facility, etc among others. It mentors the NIT AP at Tadepalligudem.

**Teaching Learning Centre of NIT Warangal:**

The Teaching Learning Centre (TLC) is established at NIT Warangal with grants from the MHRD, under the scheme, 'Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching' (PMMNMTT). Many senior and young faculty members across various departments of the Institute are associated with this Center as the Core-Team. One of the important objectives of the center is to conduct training programs for aspiring, newly inducted and in-service faculty in Science, Engineering and Social Sciences disciplines in higher education. Other activities of the TLC include preparation of print and e-learning materials, offering courses on-line, curriculum development, carrying out research in educational technology and pedagogy and integrating with E&ICT into teaching-learning process. A permanent multi-floor establishment with Training Halls, Studio, MOODLE and MOOCs, etc. facilities is under construction. The TLC has special programmes of training for the marginalized and women-faculty.

**Confirmation of Participation:**

On receipt of the filled-in Registration Form along with proof of payment of Registration Fee, the participants will be sent confirmation of their participation through Email. As the programme is conducted in a workshop mode with hands-on sessions, the number of participants in the workshop is limited to **40** only on first-come-first-served mode. *Candidates are advised to register early to avoid disappointment.*

**For Any Queries Regarding This Workshop, Please Contact The Coordinators.**

**Dr. Raghu Chitta** Coordinator

Department of Chemistry, NIT Warangal, 506 004  
Telangana State

e-mail: [raghuchitta@nitw.ac.in](mailto:raghuchitta@nitw.ac.in)

Ph. No. +91-8290529060;

or

**Dr. Jugun P. Chinta** Coordinator

NIT Warangal, 506 004, Telangana State

e-mail: [jugun@nitw.ac.in](mailto:jugun@nitw.ac.in)

Ph. No. +91-9898625503

**About Warangal:**

Warangal is the second largest city of the new state of Telangana. It is situated at a distance of 140 km from the state capital Hyderabad (Nearest Airport). It is well connected by Rail (Kazipet Junction is just two km away and Warangal Station is about 12 km away to NIT Warangal) and by Road (NH 202). Warangal is renowned for its rich historical and cultural heritage. It was the seat of erstwhile Kakatiya Dynasty. It is a seat of tourist attractions with a number of historical monuments like Thousand Pillars Temple, Warangal Fort, Bhadrakali Temple, Ramappa Temple and Lakhnavaram Lake located in a radius of about 30 kms. Warangal City is declared by the Govt. of India as Smart City. Besides NIT Warangal, the city has Kakatiya University and Kaloji University of Health Sciences besides Kakatiya Medical College and many degree and professional colleges of higher learning along with a few autonomous Deemed Universities. The city has excellent hotels, multi-specialty healthcare and shopping complexes.



*A Six Days Workshop on*  
**Instructional Strategies of Physical Methods in Chemical Analysis with Hands-  
On Experiments**

**2<sup>nd</sup> – 7<sup>th</sup> March, 2020**

*Organized by*

**Department of Chemistry NIT Warangal**  
**in association with Teaching - Learning Centre**  
*Sponsored by MHRD, Govt. of India under PMMMNMTT Scheme*

**REGISTRATION FORM**

Name : \_\_\_\_\_

Date of Birth : \_\_\_\_\_

Place of Birth: Village/Town/City: \_\_\_\_\_ Tick as applicable (Rural / Urban)

District \_\_\_\_\_ State: \_\_\_\_\_

Gender (Put a  $\sqrt$  Mark) :  Male  Female

Category (Tick as applicable): **Open / OBC / SC / ST / PWD**

Qualification : \_\_\_\_\_

Designation : \_\_\_\_\_

Organization : \_\_\_\_\_

No. of Years of Teaching Experience: \_\_\_\_\_

Address for Correspondence : \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Mobile(s): \_\_\_\_\_

Email(s) \_\_\_\_\_

Details of Remitting Registration Fee: (i) Amount in Rs. \_\_\_\_\_

(ii) Name of the Bank Through which Remitted/DD Taken: \_\_\_\_\_

(iii) On-line Transaction No./ DD No: \_\_\_\_\_ (iv) Date: \_\_\_\_\_

Accommodation (Put a  $\sqrt$  Mark) :  Required  Not Required

**Declaration by the Applicant**

If selected, I agree to abide by the rules and regulations of the workshop/ training programme and shall attend all the sessions.

Date:

Signature of the Applicant

Recommended and Forwarded

Office Seal

Signature of the Head of the Department/ Institution