Overview of the FDP:
The role of density function theory (DFT) to probe the geometries, energy minimization, property calculations, spectroscopic parameter calculations, etc. proved to be enormous. Therefore, understanding the theory and its applications have received widespread attention. This FDP consists of two parts where the theory associated with the DFT, and various aspects of Chemistry, Physics, and Materials will be dealt. The second part will be hands on experience with SCM-AMS software where the application of DFT to various challenging problems faced by Chemists, Physicists, and Materialists will be demonstrated with the help of SCM-AMS. Further, participants will be remotely provided with computer and SCM-AMS software for hands on experience to practice and workout various problems of Chemistry, Physics, and Materials.

Objectives of the FDP:
- To enable the participants to learn the Basic Principles of Density Functional Theory (DFT) and its applications to Chemistry, Physics, and Material Science.
- To facilitate the participants to DFT-based methods and protocols through hands-on experience with the help of SCM-AMS software.
- To probe the role of DFT to develop new molecules, materials, and solve the problems faced by the experimentalists.
- To empower the participants to transfer their learning experiences into their classroom-teaching practices.

Topics to be covered:
- Basics of Quantum chemistry, Density functional theory and various aspects of Chemistry, Physics and Materials
- Applications of DFT with hands on experience includes:
  a. Installation of various softwares.
  b. Building molecules and materials using Avogadro, Gabbit, SCM-AMS
  c. Solving problems of organic, inorganic, and physical chemistry
  d. Understanding Solid State Physics and Material Science with the help of SCM-AMS

Resource Persons:
Eminent Faculty from abroad, IITs, NITs, Central Universities, Teaching Learning Centres and Senior Faculty from NIT Warangal.

Mode of Delivery:
Resource Persons will deliver the online lectures through Google-Meet platform and hands-on sessions will be conducted by providing remote access to the computers in NITW via Anydesk. The essence of the FDP is to improve the teaching ability of the teachers and enabling the learners to learn. The theme of the FDP is a way in building capacity of making better teachers. Lectures can be presentation mode, Discussions and hands-on sessions. Ultimate goal of the FDP is to develop the faculty members in the new pedagogy and emerging areas of science and technology.

Registration is open to:
The program is open to all NBA and AICTE approved Engineering/Polytechnic college teachers, Degree college lecturers, research scholars, and P.G. students. The number of participants is approximately 100 and selection will be based on priority basis. The Brochure and details of the Registration Form can be downloaded from the institute website http://www.nitw.ac.in
How to Register:
Eligible candidates may apply by submitting the scanned copy of the filled registration form (attached with this mail/brochure) by E-mail to adft.tlcpcm21@gmail.com or before 17.3.2021 along with the requisite Registration Fee.

Registration Form:
Faculty members can also complete their Registration online by filling the following Google form
https://docs.google.com/forms/d/e/1FAIpQLSd8jGIbKyY8_VoVHSd6MxqBNVZ9-4bU1q8NPIHw9GwBNQ/viewform?usp=sf_link

Note: Keep the payment receipt ready as a PDF file (size < 1 MB)

Registration Fee:

<table>
<thead>
<tr>
<th>Category of Participants</th>
<th>Reg. Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty Members</td>
<td>750/-</td>
</tr>
<tr>
<td>Research Scholars</td>
<td>400/-</td>
</tr>
</tbody>
</table>

Note: Registration Fee for Faculty and Students of SC/ST category is half of the amounts mentioned above as applicable.

Bank Details:
Registration Fee may be remitted through NEFT to the Bank account given below. Proof of remittance of the requisite registration fee (with transaction number if online transaction) shall be uploaded in the Google Form.

<table>
<thead>
<tr>
<th>Account Name</th>
<th>Director, Research Account, NITW</th>
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<tbody>
<tr>
<td>Account Number</td>
<td>62266262236</td>
</tr>
<tr>
<td>Bank</td>
<td>State Bank of India (SBI)</td>
</tr>
<tr>
<td>Branch</td>
<td>NIT Warangal Campus</td>
</tr>
<tr>
<td>IFSC code</td>
<td>SBIN0020149</td>
</tr>
</tbody>
</table>

Confirmation of Participation:
On receipt of the Google Form and Fee Remittance Receipt, participants will be sent confirmation of their participation through email by 18.3.2021. As the programme is conducted online with the number of participants in the workshop is limited to 100. Candidates are advised to register early to avoid disappointment.

Brief profile of the Department:
The Department of Chemistry was established in the Year, 1959, as an integral part of the Regional Engineering College Warangal (RECW). Since its inception, the department is greeted as one of the most academically active departments in the Institute. Department offers chemistry course to all engineering branches and two years M.Sc. Chemistry with specialization in Organic and Analytical Chemistry.

The Department has been conducting cutting-edge research in contemporary topics of Organic, Inorganic, Physical and Analytical Chemistry. In the Department, various state-of-the-art facilities such as 400 MHz NMR, HRMS, gas chromatography, HPLC, FTIR, UV-Vis-NIR, fluorescence, electrochemical workstation, computational chemistry software, etc. are available. As a part of continuing education and outreach activities, Department organized several National and International Conferences, Seminars and Workshops.

Teaching Learning Centre of NIT Warangal:
The Teaching Learning Centre (TLC) has been established at NIT Warangal with grants from the MHRD, through its scheme “Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMT)”. Under this Scheme, a separate building has been built exclusively for the TLC activities, with the state-of-art training facilities that include a studio for production and uploading of video and e-lectures on various subjects of higher education, training halls to train the faculty in various theme areas of Science and Technology, humanities and social sciences, linguistics and communication skills, pedagogy and cognition evaluation, etc. among others. Many senior and young faculty are associated with this Centre as Core-Team. One of the important objectives of the Centre is to conduct training programmes for the aspiring, newly inducted and in-service faculty in science, engineering, social sciences disciplines in higher education. Other activities of the TLC include preparation of print and e-learning materials, offering on-line courses, curriculum design, carrying out research in educational technology and pedagogy and integrating with ICT into teaching-learning process. The TLC has special programmes of training for the marginalized and women-faculty.

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 and 31 post-graduate programs besides doctoral programmes. About 5000 students across the country and about 500 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 library, seminar halls, guest houses and research laboratories.

For any queries regarding the FDP, please contact the Programme Coordinators:
Name of the FDP Coordinator, Designation, Contact details, Email ID
Dr. M. Raghahudha, Asst. Prof., Department of Chemistry, 9550083100, adft.tlcpcm21@gmail.com
Dr. Ravinder Pawar, Asst. Prof., Department of Chemistry, 9490917338 adft.tlcpcm21@gmail.com

For further details about Teaching Learning Centre, please contact:
Prof. A. Ramachandraiah
Professor-in-Charge and Coordinator, Teaching Learning Centre (TLC), NIT Warangal
E-mail: archem@nitrw.ac.in; mtlc.nitrw@nitrw.ac.in
Office: 0870-2462686.