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**Organized by**

**UGC – Malaviya Mission Teacher Training Centre, Jawaharlal Nehru Technological University Hyderabad, Kukatpally, Hyderabad, Telangana.**

#### **About UGC-MMTTC, JNTUH:**

UGC-Malaviya Mission Teacher Training Centre (Formerly known as UGC-Human Resource Development Centre), Jawaharlal Nehru Technological University Hyderabad was established in the year 2000 and sponsored by University Grants Commission, New Delhi. The Malaviya Mission Teacher Training Centre of JNTUH organizes UGC sanctioned programmes viz., Faculty Induction Programmes, Orientation Programmes, Refresher Courses, Short Term Training Programmes, NEP Orientation & Sensitization Programmes and Workshops and AICTE sponsored STTP programmes and Faculty Development Programmes, Outreach Programmes and other Self-Financing Programmes on thrust areas for in-service teachers and also for newly appointed teaching faculty on a regular basis, to update the knowledge and skills in their respective fields.

During the current academic year a Two Week Online Refresher Course on "*Cooling the Future: Innovations in Battery Thermal Management Systems for Electric Vehicles*" is proposed to be organized by UGC-MMTTC, JNTUH during 16.02.2026 to 02.03.2026, through ONLINE.

#### **NO REGISTRATION FEE**

Certificate will be issued to the participants on successful completion of the course.

#### **Major Course Contents:**

- Funding landscape in India
- Materials for Electric Vehicles
- Critical Metal Recycling from spent electric vehicle batteries
- Advanced battery technologies for a better future
- Advanced energy storage technologies: Present landscape and future outlook
- Optimization approaches for next generation EV battery thermal management
- Data driven robust optimization for energy efficient cooling in electric vehicle systems
- Modelling thermal effect in electrochemical systems
- Calometry in electrochemical systems
- Thermal transport phenomena, cooling limits, and design trade-offs in electric vehicle battery systems
- Heat transfer constraints and thermal design trade-offs in electric vehicle battery packs
- Innovations in battery thermal management systems (BTMS): Fundamentals and emerging architectures
- Smart, AI-Enabled, and Sustainable BTMS: Future directions
- Physics-based electrochemical thermal battery modeling introduction
- Safety of degraded batteries
- Cooling challenges in conventional and electric vehicles: A thermal engineering perspective
- The impact of combustion and fire risks in electric vehicle batteries
- Use of phase change material in battery thermal management
- Battery thermal management systems
- Electrodes for PEM fuel cells and batteries
- Experimental and numerical cooling techniques
- Case studies of CFD simulations in battery thermal management systems for electric vehicles
- Energy storage materials
- Lithium & Sodium-ion batteries
- Life cycle analysis of battery
- Battery in future transportation required
- Introduction to EV, Vehicle fundamentals
- Drive cycle and vehicle performance, Battery pack design, Mechanical design
- Thermal safety from a materials design perspective

#### **Two -Week Online Refresher Course on** **"Cooling the Future: Innovations in Battery Thermal Management Systems for Electric Vehicles"**

**16-02-2026 to 02-03-2026**

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#### **CHIEF PATRON**



**Prof. T. Kishen Kumar Reddy**  
**Hon'ble Vice-Chancellor**  
**JNTUH, Hyderabad, T.G.**

#### **PATRON**



**Dr. K. Vijaya Kumar Reddy**  
**Rector, JNTUH**  
**Hyderabad, T.G.**

#### **PATRON**



**Dr. K. Venkateswara Rao**  
**Registrar, JNTUH**  
**Hyderabad, T.G.**

#### **CONVENER**



**Dr. M. Sushama**  
**Director (I/c), UGC MMTTC,**  
**JNTUH, Hyderabad, T.G.**

#### **COORDINATOR**



**Dr. K. Vijaya Kumar Reddy**  
**Senior Professor of Mechanical Engg., & Rector,**  
**JNTUH, Hyderabad**

## Eligibility:

- The faculty members from the departments of Mechanical Engineering, Civil Engineering, Metallurgical Engineering, Chemical Engineering, Aeronautical Engineering, Physical Science, and Chemistry departments related disciplines working in Universities and Colleges.
- The faculty members have to be sponsored by the concerned Principal of the College/ Head of the Institution for considering the participation in the Programme.

## How to apply:

- The faculty members desirous to participate in the program are requested to register their details through online mode at <https://intuhhrdc.in/delegate-registration> on or before 12<sup>th</sup> February 2026.
- Login to UGC HRDC Portal and register as participant by visiting: <https://intuhhrdc.in/delegate-registration>
- A filled-inform of application duly signed by the faculty member and forwarded by the Head of the Institution. And letter of forwarding from the Head of the Institution, should be uploaded in HRDC <https://intuhhrdc.in/delegate-registration> portal on or before the last date.

## Confirmation by Participants:

- Confirmation by Participants is a must, as per the date specified overleaf. If the confirmed number of participants is less than 60, the course may be re-scheduled.

## Resource Persons:

- Resource persons are drawn from different Universities, Institutions, and R&D establishments.

## Selection Criteria:

- Selection will be done based on *first-come-first-serve basis* to a maximum number of 80. The list of selected participants will be intimated through E-mail.

## Important Dates:

Last date for the receipt of application through online: **12<sup>th</sup> February, 2026**

Intimation of selection to the participants through e-mail: **13<sup>th</sup> February, 2026**

Course duration: **16-02-2026 to 02-03-2026**

Course Timings: **10.00 AM to 1.15 PM & 2.00 PM to 5.15 PM**

### *Address for all Correspondence*

#### **Dr. M. Sushama**

**Professor, Dept. of EEE & Director (I/c)  
UGC-Malaviya Mission Teacher Training  
Centre**

**Jawaharlal Nehru Technological University  
Hyderabad, Kukatpally, Hyderabad –  
500 085, Telangana.**

**Please contact: 8008103814**

**(All working days from 10.30 am to 5.00 pm  
only)**

**or [directorhrdcintuh@intuh.ac.in](mailto:directorhrdcintuh@intuh.ac.in) for more  
enquiries about the Short Term Course**

**Web: [www.intuhhrdc.in](http://www.intuhhrdc.in)**

## Instructions to the Participants for Online Course:

- Filling the registration form is mandatory.
- Attendance for all the sessions, Completion of activities, assignments and online tests given by the Resource Persons are mandatory.
- All sessions will be conducted in Google Meet.
- Link will be provided a day in advance.
- Limited seats are available on a First-Come-First-Serve basis.
- During the course, each teacher-participant will be required to work on a mini Project important topics related to the theme of this course
- There will be an online assessment test in the form of MCQ's. An online certificate will be issued to those who have successfully attended the 12 days programme and qualified the assessment test.