

The Department of Chemistry at ATME College of Engineering offers both theoretical and practical disciplines. Chemistry is basic in the studies of Engineering and technology. The Department of Chemistry is well known for its excellence in teaching and research. The faculty members of the department are well qualified and engaged in state-of-the-art research as well as guiding the Engineering and Ph.D. Students. The research lab is provided with a vast area for wet lab operation and a separate working place for dry lab. Both places are well equipped with working tables, enough computers, Wi-Fi internet, and other facilities such as glassware and numerous chemicals for the smooth conduct of experiments.

The Department of Mathematics was started in the year 2010. The faculty of the department are experts in various branches of mathematics. Apart from teaching the faculties are involved actively in research, and providing academic guidance to students, they also interact with other departments providing real-time solutions to their mathematical problems. The department is committed to continuous improvement in quality education by enhancing knowledge and plays a crucial role in advancing mathematical knowledge, educating students in mathematics, and promoting the importance of mathematics in various fields.

## For More Details Contact:

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**Registration Link:**      **Registration Fee: Rs.600/-**

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## Organizing Committee

**Faculty Members and Staff of Departments of  
Basic Sciences & Humanities, ATMECE**



**A T M E**<sup>®</sup>  
College of Engineering



A three-day FDP on  
**“Essential Sciences for Engineering  
& Research 2025”**

Organized by  
**Departments of Basic Sciences  
(Physics, Chemistry & Mathematics)**

**Dates:**  
15<sup>th</sup> January 2025 to 17<sup>th</sup> January 2025

**Venue:**  
ATME College of Engineering, Mysuru

**ATME College of Engineering**

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## Objective

- To understand the essential topics of Applied Sciences and Engineering
- To familiarize with the new avenues of research in materials used in Batteries.
- To Find, Predict and Understand the Ground state energy of the Molecules/ Materials using DFT.
- To Exposure the advanced techniques in characterization, such as SEM, TEM, XRD, and Raman spectroscopy, and their relevance in battery material research.

## Outcome

- At the end of the program the faculty will be able to
- Participants gain in-depth knowledge about the synthesis and applications of nanomaterials in battery technologies.
  - Exposure to advanced techniques in characterization, such as SEM, TEM, XRD, and Raman spectroscopy, and their relevance in battery material research.
  - Identification of gaps in current research and potential areas for exploration, such as green synthesis of nanomaterials or recycling of battery components.
  - Encouragement to undertake interdisciplinary research combining chemistry, physics, materials science, and engineering.

## Contents of FDP

- Nano Materials.
- Spectroscopic techniques & Characterization.
- Material Characterization.
- Density Function Theory (DFT).
- Nano materials for Sensor and Devices development
- Structural Characterization of XRD, SEM, TEM, SAED, XANES.
- Na-ion Batteries which replaces Li-ion batteries.
- Advanced electrode materials for Batteries.

## Resource Persons/ Experts

The resource persons for the faculty development program shall include faculty members from Affiliated Universities, premier Institutes, host Institutions, and Industry.

## Targeted Participants

Faculty Members of AICTE Approved Institutions, First Grade Colleges, Universities, Research Scholars, PG Scholars, Participants from Industry and Staffs of host Institution.

- The number of Participants is limited to 75.
- The Selection is based on a first come first serve basis.

## About FDP

In 2022, VTU introduced a new curriculum and scheme. A Faculty Development Program (FDP) is necessary to meet the faculty's requirements and explore new research opportunities. The FDP titled "Fundamentals of Applied Sciences for Engineering Curriculum and Research" aims to provide participant faculty with essential knowledge and skills in teaching and research. This workshop intends to have the participation of faculty members from the departments of Mathematics, Physics, Chemistry, CSE, EEE, ME, CV and ECE on interdisciplinary concepts like Nano Materials, Spectroscopic techniques & Characterization, Material Characterization, Density Function Theory (DFT), Nano materials for Sensor and Devices development, Structural Characterization of XRD, SEM, TEM, SAED, XANES, Battery Technology and Advanced electrode materials for Batteries.

## About Mysuru

Mysuru is located at about 145.2 km towards the southwest of Bengaluru and spread across an area of 156Sq.km. The cultural ambiance and achievements of Mysuru has earned it the Cultural Capital of Karnataka. Mysuru is noted for its heritage structures and palaces, including the Mysuru Palace. In addition, it is noted for the festivities that takes place during the Dasara festival. Tourism is the major industry alongside the traditional industries. Mysuru is well connected with Air, Rail and Road ways to major cities of India.

## ATME College Of Engineering

ATME College of Engineering Mysuru, established in 2010, is recognized by AICTE New Delhi and affiliated with Visvesvaraya Technological University, Belagavi, Karnataka. The college offers 9 undergraduate programs and one postgraduate program.

ATMECE has obtained re-accreditation. The UG program is accredited for Civil Engineering, Computer Science, Electronics & Communication, Electrical & Electronics, and Mechanical Engineering Courses from the NBA for 3 years.

The college has achieved ISO 9001-2015 certification and has been honored as "The Best Emerging Private Engineering College in Karnataka" along with "Most Promising Upcoming Private Engineering College in Karnataka" for two consecutive years. It also holds QS I-Gauge Gold Ranking status and was recognized as one of the "Swachh Institutes of the Country in 2019-20". Furthermore, ATMECE is NACC accredited with an A+ grade and is one among seven engineering colleges in Karnataka to achieve this rating during its first cycle.

All departments at the institute have established recognized research centers by VTU to pursue Msc. Engg. and Ph.D. The institute has secured over Rs.5 crores in external funding for various research & consultancy projects over the past five years. The institute boasts collaborations with more than twenty-five industries and institutes worldwide.

## About Department of Basic Sciences & Humanities

The Department of Physics started in 2010 with an excellent infrastructure. It aims to teach engineering students the basics of physics for practical application in engineering and technology. The department offers courses aligned with the university curriculum, as well as extra activities. The Engineering Physics Laboratory is equipped with modern tools, and the faculty focuses on academic and technical excellence through effective teaching practices. Research activities are also prioritized, including new setups for studies in Tribology and Energy Devices.