CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY

An Autonomous Institute | Affiliated to Osmania University

Kokapet Village, Gandipet Mandal, Hyderabad, Telangana-500075, www.cbit.ac.in

ISO 9001:2015 Certified | ISO 21001:2018 | ISO 50001:2018 | ISO 14001:2015 | NAAC A++ | nirf Rank Band 150-200

COMMITTED TO RESEARCH, INNOVATION AND EDUCATION — 48 years

AICTE–ATAL ONE WEEK ONLINE FACULTY DEVELOPMENT PROGRAMME (FDP)

AI-Enabled Advanced Materials: Design, Characterization and Applications for Sustainable Energy, Electronics and Healthcare

07–12 DECEMBER 2026 | ONLINE | APPLICATION NO. 1786594982

ABOUT THE FDP

AI-Enabled Advanced Materials: Design, Characterization and Applications for Sustainable Energy, Electronics and Healthcare is an interdisciplinary Faculty Development Program (FDP) that explores the integration of Artificial Intelligence with advanced materials research. The program covers AI-driven material design, computational modelling, advanced characterization techniques, and data-driven optimization for developing next-generation materials. It highlights applications in sustainable energy storage, semiconductors, flexible electronics, sensors, and biomedical technologies. Participants will gain insights into emerging research trends, industrial applications, and AI-enabled innovations accelerating materials discovery and engineering.

TOPICS

- Introduction to AI in Materials Science
- AI-Driven Materials Discovery and Design
- Materials Informatics and Machine Learning
- Advanced Functional Materials
- AI-Assisted Materials Characterization
- AI for Energy Storage and Conversion Materials
- AI for Electronic and Semiconductor Materials
- AI for Biomedical and Healthcare Materials
- Generative AI and Digital Tools for Materials Research
- Industry Applications and Case Studies
- Future Trends in AI-Driven Advanced Materials

INSTITUTIONAL LEADERSHIP

Chief Patron
Sri N. Subash, President

Patron
Prof. C.V. Narasimhulu, Principal

Advisors
Prof. P.V.R. Ravindra Reddy, Vice Principal – Administration
Prof. K. Krishnaveni, Vice Principal – Academics
Prof. N. V. Koteswara Rao, Director – IQAC
Prof. Suresh Pabboju, Director – AEC & CoE
Prof. P. Prabhakar Reddy, Director – Academics
Prof. B. Linga Reddy, Director – Students Affairs & Progression
Prof. Umakanta Chaudhury, Director – Innovation & Incubation
Dr. N. L. N. Reddy, Advisor – Career Development Cell
Prof. T. V. Devi Prasad, Director – Career Development Cell
Prof. Y. Ramadevi, HoD – CSE (AI & ML) Dept.
Prof. K. Laxmi, HoD – Chemistry Dept.

ORGANIZING DEPARTMENTS

Department of Chemistry
and
Department of CSE (AI & ML)

KEY PROGRAMME FEATURES

- Interdisciplinary learning connecting Artificial Intelligence with materials chemistry and engineering.
- Exposure to AI-driven materials discovery, machine learning and advanced characterization.

PROGRAMME AT A GLANCE

Dates: 07th–12th December 2026
Mode: Online
Application No.: 1786594982

SPONSORED BY

AICTE Training and Learning (ATAL) Academy

ADDRESS FOR CORRESPONDENCE

The Coordinator,
Department of Chemistry, H Block
Chaitanya Bharathi Institute of Technology (A),
Kokapet (V), Gandipet (M),
Chaitanya Bharathi (PO), Hyderabad–500075
Email: dsaritha_chm@cbit.ac.in
Mobile: 9591908844

AICTE–ATAL REGISTRATION

Application No.: 1786594982
Register through the AICTE–ATAL Portal
No participant fees will be collected for registration, course and certification.

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SOP:006 | ISO:2015 Certified | RO1:2015 | RO1:209 | RO0:2015 | SOR:006 | NAAC A++ | nirf Rank Band 150-200

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ABOUT THE INSTITUTE

Chaitanya Bharathi Institute of Technology (CBIT), established in 1979, is one of the premier engineering institutions in Telangana and Andhra Pradesh. The Institute was promoted by a group ofvisionaries from diverse professions with the objective of providing quality Engineering and Management education and developing skilled and technically competent professionals. CBIT offers 11 Undergraduate and 10 Postgraduate programs and has been an Autonomous Institution under UGC since 2013–14. It is UGC recognized, has been accredited by the National Board of Accreditation (NBA) on multiple occasions, and five PG programs were accredited by NBA in 2020. The Institute was reaccredited by NAAC with an 'A++' grade and a CGPA of 3.59/4.00 in 2022. CBIT is ranked in the 150–200 rank band in Engineering under NIRF, Government of India. The Institute has a 50-acre campus with modern infrastructure, laboratories, research facilities, and a strong academic and industry-oriented learning environment.

ABOUT THE CHEMISTRY DEPARTMENT

The Department of Chemistry at Chaitanya Bharathi Institute of Technology (CBIT), Hyderabad, plays a vital role in providing a strong foundation in chemistry for engineering students. The department offers quality teaching in Engineering Chemistry and promotes interdisciplinary learning, research, and innovation. Faculty members are actively engaged in research areas including nanomaterials, energy storage materials, polymers, advanced materials, and sustainable technologies. The department.supports laboratory-based learning through well-equipped facilities and encourages students to develop scientific thinking, technical skills, and problem-solving abilities. It contributes to academic excellence, research activities, and students' overall professional development.

RESOURCE PERSONS

The sessions will be delivered by eminent experts, academicians, and researchers from premier institutions such as the Indian Institutes of Technology (IITs), National Institutes of Technology (NITs), reputed universities, leading research organizations, and industry. The resource persons bring extensive expertise in Artificial Intelligence, Advanced Materials, Materials Science, Energy Storage, Electronics, and emerging technologies.

ABOUT THE CSE (AI & ML) DEPARTMENT

The Department of Computer Science and Engineering (Artificial Intelligence and Machine Learning) at Chaitanya Bharathi Institute of Technology (CBIT), Hyderabad, was established in 2020–21 with an initial intake of 60 students which increased to 180 from 2026–27. The department focuses on Artificial Intelligence, Machine Learning, Deep Learning, Data Analytics, Computer Vision, and Natural Language Processing, promoting research, innovation, industry engagement, and skill development for careers in emerging technologies.

OBJECTIVES

- To provide participants with an understanding of AI-enabled approaches for the design and development of advanced functional materials.
- To introduce modern synthesis, characterization, and computational techniques used in advanced materials research.
- To explore emerging applications of advanced materials in energy, electronics, healthcare, and sustainable technologies.
- To demonstrate the integration of artificial intelligence, machine learning, and materials informatics for accelerated materials discovery.
- To promote interdisciplinary research, industry–academia collaboration, and innovation in advanced materials.

INTERDISCIPLINARY LEARNING

The FDP brings together materials science, chemistry, computer science and artificial intelligence. Participants will explore how data-driven methods can support materials discovery, characterization and application-oriented research in energy, electronics, and healthcare.

ELIGIBILITY

Faculty members, research scholars and PG scholars from AICTE-approved institutions and industry personnel.

OUTCOMES

- Understand recent advances in AI-driven materials design and advanced functional materials.
- Apply modern characterization and computational tools for materials research and analysis.
- Identify suitable advanced materials for applications in energy, electronics, healthcare, and sustainability.
- Develop interdisciplinary research proposals integrating AI and materials science.
- Establish collaborative research networks with academia, research laboratories, and industry.

GUIDELINES

- No participant fees will be collected for Registration, Course and Certification.
- All participants have to register through AICTE–ATAL portal.
- All sessions are conducted online.
- Minimum 100 participants should be ensured.
- Eligible participants will be selected based on first come, first serve basis and will be intimated by email only.

REGISTRATION & CONTACT

AICTE–ATAL Application No.: 1786594982
https://atalacademy.aicte-india.org/signup
Coordinator: Dr. D. Saritha Associate Professor, Chemistry Dept., CBIT
9591908844 | dsaritha_chm@cbit.ac.in
Co-Coordinator: Dr. B. Swathi Sowmya Assistant Professor, CSE (AI & ML) Dept., CBIT
9494568008 | swathisowmya_it@cbit.ac.in

PROGRAMME SCHEDULE

7–11 December 2026: 6:00 PM–9:00 PM
12 December 2026: 2:00 PM–6:00 PM
Mode: Online