

Introduction

As the frequency and intensity of natural disasters continue to escalate due to climate change and urban expansion, the need for resilient infrastructure has become a national and global imperative. The traditional approaches to construction are proving inadequate in the face of emerging challenges such as earthquakes, floods, and cyclones. In this critical context, innovative materials and smart construction technologies are playing a transformative role in shaping the next generation of infrastructure systems that are not only sustainable but also disaster-resilient.

Recent advancements such as 3D concrete printing, green and low-carbon cements, sensor-integrated materials for structural health monitoring, and AI-driven construction analytics are revolutionizing the civil engineering landscape. These technologies hold the potential to drastically improve the performance, longevity, and adaptability of infrastructure while reducing environmental footprints. Recognizing the urgent need to empower educators and professionals with knowledge of these cutting-edge developments, this AICTE-ATAL sponsored Faculty Development Programme (FDP) aims to provide hands-on insights into next-generation materials and technologies tailored for disaster resilience.

Objectives

The Objectives of the program are

- To equip participants with the theoretical foundations, experimental methods, and practical strategies essential for integrating innovation into both academic curricula and real-world infrastructure projects.
- To provide exposure to advanced materials, innovative construction technologies, structural health monitoring, and sustainable practices aimed at improving infrastructure resilience against natural and man-made hazards.

- To serve as a platform for knowledge exchange, capacity building, and fostering collaborative initiatives toward creating robust, smart, and sustainable civil infrastructure systems in India and beyond.
- Foster interdisciplinary collaboration and innovation in the field of Disaster-Resilient Infrastructure.

Who can attend?

- The faculty members, Research scholars & PG Scholars of the AICTE approved institutions and Industry Personnel.
- Not more than 20% from Host Institution. For North Eastern and Jammu Kashmir & Ladakh Region 30% participation from host institute is allowed.
- Minimum 100 participants should be ensured for conduct of the FDP.

ATAL FDPs are completely free for participants.

How to Register for FDP?

Eligible candidates have to register through the following link on or before 25th December 2025.

<https://www.aicte-india.org/atal> (or)

<https://atalacademy.aicte-india.org/signup>

No Registration Fee

Confirmation of Participation and Certificates

- Upon the registration, confirmation will be sent to the selected participants through email on 01.01.2026. Minimum 100 participants should be ensured for conduct of the FDP.
- The detailed schedule will be shared only to the confirmed participants through email and WhatsApp.
- Certificate will be provided by the ATAL academy to those who have attendance more than 80%, filled daily feedback form and successfully completed the assessment test with score more than 70% at the end of the program.

6 DAYS ONLINE FACULTY DEVELOPMENT PROGRAMME ON

“Next-Gen Materials and Technologies for Disaster-Resilient Infrastructure”

26.01.2026 to 31.01.2026

Sponsored by

AICTE Training and Learning (ATAL) Academy



Coordinators

Prof. V. MALLIKARJUNA

Professor & Head, Department of CE

Dr. S. R. R. TEJA PRATHIPATI

Assistant Professor, Department of CE



Organized by

Department of Civil Engineering

VR Siddhartha School of Engineering

SIDDHARTHA ACADEMY OF HIGHER

EDUCATION

(Deemed to be University)

(Autonomous)

Vijayawada

Andhra Pradesh - 520007

www.vrsiddhartha.ac.in

9441308979,9959032163

About the College

In 2024, VR Siddhartha Engineering College was declared as a deemed-to-be university under Section 3 of the UGC Act, 1956 by Ministry of Education, Government of India. With a legacy of educational excellence, the institution's UGC-granted autonomy, renewed through 2027-28, provides a strong foundation for its transformation. Established in 1977, we are the first self-financed engineering college in the combined state of Andhra Pradesh. Offering 9 UG and 7 PG programs, we have student strength of 1470. Accredited by NBA since 1998 and recognized for Outcome Based Education (Tier I) since 2013, we are ranked 141st in NIRF (2022). Only private institute in A.P. selected for MARGADARSHAN scheme by AICTE to share & Mentor institutions in the region for quality upgradation & accreditation of the programs. Only self-financing institution in A.P recognized as a Band-Excellent Institution under ARIIA (Atal Ranking of Institutions on Innovation Achievements) by MHRD. The college is also accredited by NAAC with 'A+' grade, and also certified by "ISO – 21001:2018. Ours is one of the TEQIP S.C.1.2 institutions in the country awarded with a World Bank Grant by MHRD, Govt. of India. Our students benefit from strong alumni support, international exposure, and state-of-the-art facilities, including solar power generation for sustainability.

About the Department

One of the oldest departments of the college offers undergraduate and postgraduate program (Structural Engineering). Both programs are accredited by NBA. The department is privileged to be recognized as one of the best Civil Engineering departments in the country as we are awarded Best Industry Institute Linked Technical Institute. Funding for research helps the department to maintain and modernize our research infrastructure. The department has state of the art advanced laboratories to cater the needs of students, research and consultancy. The department has total faculty of 28, with 19 doctorates. The number of sanctioned students for B. Tech., and M. Tech. SE. are 120, and 18, respectively, per year. Currently, the department has 16 Ph.D. scholars. The department takes pride in its highly experienced

faculty specialized in all major specializations of Civil Engineering. VCMTL lab has NABL Accreditation.

Resource Persons

	Prof. Subramaniam Kolluru V.L., Professor, Civil Engineering, IIT Hyderabad. Topic: Advances in Processing leading to Concrete 3D Printing.
	Prof. Sanjay Kumar Shukla, Professor, School of Engineering, Edith Cowan University, Australia Topic: Geosynthetics for Slope Stability and Erosion Control in Infrastructure Projects
	Prof. Tadikonda Venkata Bharat Professor, Civil Engineering, IIT Guwahati Topic: Sustainable Materials and practices for landslide risk mitigation
	Prof. Sarat Kumar Das Professor, Civil Engineering, IIT/ISM Dhanbad Topic: Foundations on Expansive and Collapsible Soils: Design and Mitigation Strategies
	Dr. Ambika S Assistant Professor, Civil Engineering, IIT Hyderabad Topic: Next Generation Membranes for Pollution Remediation
	Dr. K Gopi Krishna Associate Professor, Civil Engineering, NIT WARANGAL Topic: Multi-Hazard Risk Assessment and Mitigation Strategies for Resilient Infrastructure
	Dr. Srimaruthi Jonnalagadda R&D Structural Engineer, Tindall Corporation, Atlanta, USA Topic: Overview of Disaster-Resilient Infrastructure: Challenges and Opportunities
	Mr. Srikanth Dharmaji Senior Manager, Rustomjee, Mumbai. Topic: Integrating ESG Principles in Construction for Disaster-Resilient and Sustainable Infrastructure

	Mr. Prasad C A, Director, Metey Engineering & consultancy Pvt. Ltd Topic: Policy, Economics, and Regulatory Frameworks for Emerging Construction Technologies
	Mr. Aditya Praasad Botla, Principal Engineer - Mechanical Systems, Lennox India Technology Centre Topic: Design of Disaster Resilient Infrastructure - Role of Simulations in Enhancing Disaster Resilience
	Mr. Parivarthan Reddy Co-Founder, Tvasta Manufacturing Solutions Private Limited Topic: Concrete 3D Printing Applications
	Mr. V R Ravi Kiran Reddy Technical Manager, L&T Pvt. Ltd. Topic: Prefabrication and Modular Construction for Post-Disaster Recovery
	Dr. Subbarao Yarramsetty Senior Manager, Reliance Industries Limited, Mumbai. Topic: BIM-Enabled Smart Material Selection: Integrating EPDs, Energy Analysis, and Digital Twins at Conceptual Stage

ORGANIZING COMMITTEE

Chief Patron

Sri KV Chowdary, IRS, Chancellor, SAHE

Patron(s)

Prof P Venkateswara Rao, Vice Chancellor, SAHE

Prof A V Ratna Prasad, Pro- Vice Chancellor, SAHE

Prof D Venkat Rao, Dean, VRSSE

Coordinators



Prof. V. MALLIKARJUNA
Professor & Head, Department of CE
VRSSE, SAHE
Email: hodce@vrsiddhartha.ac.in
Mobile: **9441308979**



Dr. S R R TEJA PRATHIPATI
Assistant Professor, Department of CE
VRSSE, SAHE
Email: teja@vrsiddhartha.ac.in
Mobile: **9959032163**

ATAL Online 6 Day Faculty Development Programme 2025-26 Schedule

FDP Thrust Area: Disaster Management & Resilient Infrastructure

FDP Title: Next-Gen Materials and Technologies for Disaster-Resilient Infrastructure

Start Date: 26th January 2026

End Date: 31st January 2026

DAY 1 (26 th Jan 2026)	DAY 2 (27 th Jan 2025)	DAY 3 (28 th Jan 2025)	DAY 4 (29 th Jan 2025)	DAY 5 (30 th Jan 2025)	DAY 6 (31 st Jan 2025)
6:00PM to 6:30PM Inaugural Session	6:00PM to 7:30PM Session 3 Topic: Policy, Economics, and Regulatory Frameworks for Emerging Construction Technologies Mr. Prasad C A Policy, Economics, and Regulatory Frameworks for Emerging Construction Technologies Years of Exp: 25 Years	6:00PM to 7:30PM Session 5 Topic: Geosynthetics for Slope Stability and Erosion Control in Infrastructure Projects Prof. Sanjay Kumar Shukla, Professor, School of Engineering, Edith Cowan University, Australia Years of Exp: 25 Years	6:00PM to 7:30PM Session 7 Topic: Sustainable Materials and practices for landslide risk mitigation Prof. Tadikonda Venkata Bharat Professor, Civil Engineering, IIT Guwahati Years of Exp: 15 Years	6:00PM to 7:30PM Session 9 Topic: Prefabrication and Modular Construction for Post-Disaster Recovery Mr. V R Ravi Kiran Reddy Technical Manager, L&T Pvt. Ltd Years of Exp: 15 years	2:00PM to 3:30PM Session 11 Topic: Overview of Disaster-Resilient Infrastructure: Challenges and Opportunities Dr. Srimaruthi Jonnalagadda R&D Structural Engineer, Tindall Corporation, Atlanta, USA Years of Exp: 20 Years
6:30PM to 8:00PM Session 1 Topic: Advances in Processing leading to Concrete 3D Printing Prof. K. V. L. Subramaniam, Professor, Civil Engineering, IIT Hyderabad Years of Exp: 21 Years	7:30PM to 9:00PM Session 4 Topic: Next Generation Membranes for Pollution Remediation Dr. Ambika S Assistant Professor, Civil Engineering, IIT Hyderabad Years of Exp: 13 Years	7:30PM to 9:00PM Session 6 Topic: BIM-Enabled Smart Material Selection: Integrating EPDs, Energy Analysis, and Digital Twins at Conceptual Stage Dr. Subbarao Yarramsetty, Senior Manager, Reliance Industries Limited, Mumbai Years of Exp: 14 Years	7:30PM to 9:00PM Session 8 Topic: Multi-Hazard Risk Assessment and Mitigation Strategies for Resilient Infrastructure Dr. K Gopi Krishna, Associate Professor, Civil Engineering, NIT Warangal. Years of Exp: 19 Years	7:30PM to 9:00PM Session 10 Topic: Foundations on Expansive and Collapsible Soils: Design and Mitigation Strategies Prof. Sarat Kumar Das Professor, Civil Engineering, IIT/ISM Dhanbad Years of Exp: 23 Years	3:30PM to 5:00PM Session 12 Topic: Concrete 3D Printing: From Lab to Real-World Applications Mr. Parivarthan Reddy, Co-Founder, Tvasta Manufacturing Solutions Private Limited Years of Exp: 12 Years
8:00PM to 9:30PM Session 2 Topic: Design of Disaster Resilient Infrastructure - Role of Simulations in Enhancing Disaster Resilience Mr. Aditya Praasad Botla, Principal Engineer - Mechanical Systems, Lennox India Technology Centre Years of Exp: 20 years					5:00PM to 6:30PM Session 13 Topic: Integrating ESG Principles in Construction for Disaster-Resilient and Sustainable Infrastructure Mr. Srikanth Dharmaji, Senior Manager, Rustomjee, Mumbai Years of Exp: 22 Years
					6:30PM to 7:30PM Online test & Feedback
					7:30PM to 8:00PM Valedictory Session