

**Two Days
Executive Development Program
On**

**"Next-Gen Process Engineering: AI,
Waste Heat Recovery, and Multi-
Objective Optimization"**

Who Should Attend?

- **Process Engineers & Lead Designers:** Seeking lower-CAPEX separation flowsheets.
- **Plant Managers & Technical Directors:** Aiming to de-bottleneck units and hit net-zero targets.
- **Energy & Sustainability Leads:** Targeting deep carbon and heat recovery gains.
- **R&D Specialists & Academics:** Applying advanced optimization to unit operations.

Contact Us:

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Dr. Aslam M

Associate Professor & H.O.D

School of Chemical Engineering, VIT

Coordinators:

Dr. Bandaru Kiran,

Associate Professor,

School of Chemical Engineering, VIT

Dr. G.S. Nirmala,

Professor,

School of Chemical Engineering, VIT

Dr. Mahesh Ganesh Pillai,

Professor,

School of Chemical Engineering, VIT

Registration Fee: 1500 (Inclusive GST)

Important Dates

Registration Date is from:

20-09-2026 to 08-10-2026



VIT

Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

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**Next-Gen Process Engineering: AI,
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Objective Optimisation**

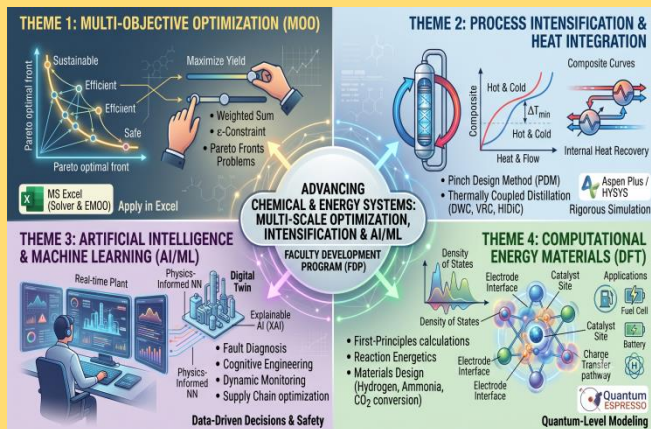
8th-9th October, 2026

Learning Outcomes

- Outline AI and its capabilities
- Identify potential uses of AI in process engineering
- Describe pinch analysis for heat integration
- Identify opportunities for waste heat recovery
- Describe optimization and its applications
- Explain optimization for multiple objectives
- Solve optimization problems using programs in MS Excel

Organized by

**School of Chemical Engineering
Vellore Institute of Technology, Vellore,
Katpadi, Tamilnadu-632014**



Speakers:

Prof. G. P. Rangaiah



is an **Emeritus Professor** in the Department of Chemical and Biomolecular Engineering, **National University of Singapore**. He has expertise in Process Design, Optimization, Simulation and Control. He supervised 26 PhD theses and 25 Masters theses, all at NUS. He has published more than 230 papers in peer-reviewed international journals, 12 Books and many Book chapters. He has received several distinguished awards and developed the free software for optimization. He investigated multi-objective optimization and its applications, and edited the first book on multi-objective optimization in chemical engineering. His recent book is on multi-criteria decision-making, published in March 2026.

Register Using the Link

[Needs to update](#)

Prof. Bandaru Kiran



is an **Associate Professor** in the School of Chemical Engineering at the **Vellore Institute of Technology, Vellore**. He has expertise in Process intensification, Advanced heat integration, Thermally coupled distillation, Techno-economic analysis (TEA), Bioenergy production, and Process safety. He has published numerous research papers in peer-reviewed international journals and holds key research grants, including a startup grant from DST NIDHI PRAYAS & consultancy projects worth 1crore. His contributions focus on low-carbon process design, waste-to-energy conversion, and the integration of artificial intelligence and machine learning into chemical process

Prof. Shankar Raman D



is an **Associate Professor** in the School of Chemical Engineering at the **Vellore Institute of Technology, Vellore**. He has expertise in Hydrogen Technologies (Fuel Cells & Electrolyzers), Electrochemical Systems, Green Electrolysis, AI/ML Applications in Chemical Processes, Process Systems Engineering, and Clean Energy Storage Systems. He has published numerous research papers in peer-reviewed international journals and holds significant research achievements, including leadership roles in global electrochemical diagnostic frameworks and green energy consulting. His contributions focus on fuel cell diagnostics and optimization, quantum & physics-informed AI modeling, membrane distillation/electrolysis, and sustainable process systems design

Objectives

- Bridge Academic Engineering Paradigms to Scalable Industrial Applications
- Advance Decarbonisation and Energy Efficiency in Chemical Manufacturing processes
- Stimulate Multiscale Modelling and Molecular-to-Plant Scale Design
- Integrate AI and Advanced Control for Industrial Rigidity and Safety
- Empower Multi-Criteria Decision-Making for Circular and Green Technologies

