INDIA NUCLEAR FORUM

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शैक्षिक प्रसार
Educational Outreach

GESH IITB

TRAINING PROGRAMME ON

NUCLEAR POWER GENERATION

Organised by IIT Bombay Research Hub for Green Energy & Sustainability (GESH IITB)

In person at IIT Bombay

COURSE **OVERVIEW**

This short-term programme provides a comprehensive overview of the principles and technology of nuclear power generation and their role in energy transition and sustainability. Participants will explore the fundamentals of reactor physics, thermal hydraulics, and safety, alongside regulatory frameworks and economic considerations. The programme also covers emerging technologies, including Generation IV reactors and Small Modular Reactors (SMRs), giving participants the knowledge to understand the operation, performance, and cost competitiveness of modern nuclear power plants.

COURSE **OUTLINE**

DAY 1

Fundamental Concepts and System-Level Perspectives

- Introduction to Nuclear Power Generation
- Economics of Nuclear Power Plants
- Role of Nuclear Energy in the Green Energy Transition
- Nuclear Reactor Physics

DAY 2

Engineering, Safety, and Regulatory Aspects

- Heat Transfer in Nuclear Reactors
- Nuclear Reactor Thermal Hydraulics
- Nuclear Reactor Safety
- Nuclear Fuel Cycle
- Regulatory and Operational Issues

KEY BENEFITS **FOR PARTICIPANTS**

- Develop strong conceptual clarity in reactor operation and performance
  Understand safety systems and defence-in-depth approach
- Gain insight into cost competitiveness and lifecycle economics
  Learn how nuclear energy supports reliable, low-carbon power
- generation
  Explore advanced reactor technologies shaping the future of energy
- Understand policy, regulatory, and operational aspects of nuclear plants
  Enhance professional competence in the energy and power sector

TARGET **AUDIENCE**

- Faculty members and researchers from academic and research institutions.
  Engineers and scientists from nuclear, power generation, and energy
- sectors.
  Professionals from industry, government, regulatory, and R&D organizations.
- Postgraduate students interested in nuclear energy systems and reactor design.

INSTRUCTORS

IIT BOMBAY FACULTY

- Prof. SuneetSingh,*DepartmentofEnergy Science and Engineering*
- Prof. Venkatasailanathan Ramadesigan, *Department of Energy Science and Engineering*
- Prof. Janani Srree Murallidharan, *Department of Mechanical Engineering*
- Prof. Arunkumar Sridharan, *Department of Mechanical Engineering*

INDUSTRY EXPERTS

- Dr. C. P.Kaushik*(FormerDirectorofNRB,BARC, Sr. Tech advisor, Core Energy Systems)*
- Dr. Shamasundar *(MD, ProSIM R&D Pvt. Ltd.)*
- Mr. Santosh Mankani *(Project Manager - Nuclear, ProSIM R&D Pvt. Ltd.)*
- Mr. Jaya Krishna *(Team Leader, Nuclear, ProSIM R&D Pvt. Ltd.)*

IMPORTANT **DATES**

DURATION	REGISTRATION **DEADLINE**
12-13 March 2026	**5 March 2026**

COURSE **FEE**

CATEGORY	**FEE (INR)+** *GST APPLICABLE*
PG STUDENTS	13000
ACADEMIA	15000
GOVERNMENT / INDUSTRY	20000
FOREIGN PARTICIPANTS	50000

Programme fee includes in-person sessions, post-session PPTs and reading materials, and on-campus refreshments.

Travel and accommodation are not included.

REGISTRATION **PROCESS**

Scan here to register

Step 1 - Scan the QR code or click on the registration link.
Step 2 - Register with your email ID.
Step 3 - Click on the activation link received in your email.
Step 4 - Fill in the required details to complete the registration.
Step 5 - Go to the home page and log in with your email ID and password.
Step 6 - Select or click on CEP/GIAN Courses.
Step 7 - Search for the course name "Nuclear Power Generation" and enter your personal, other required information and fee details.
Step 8 - Submit the application.

CONTACT **US**

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For more info, visit gesh.iitb.ac.in