ROTATING MACHINERY BOOTCAMP

TURBINES

(With Digital Enablement and IIoT Focus)

A TWO-DAY CERTIFICATION COURSE

Supported by

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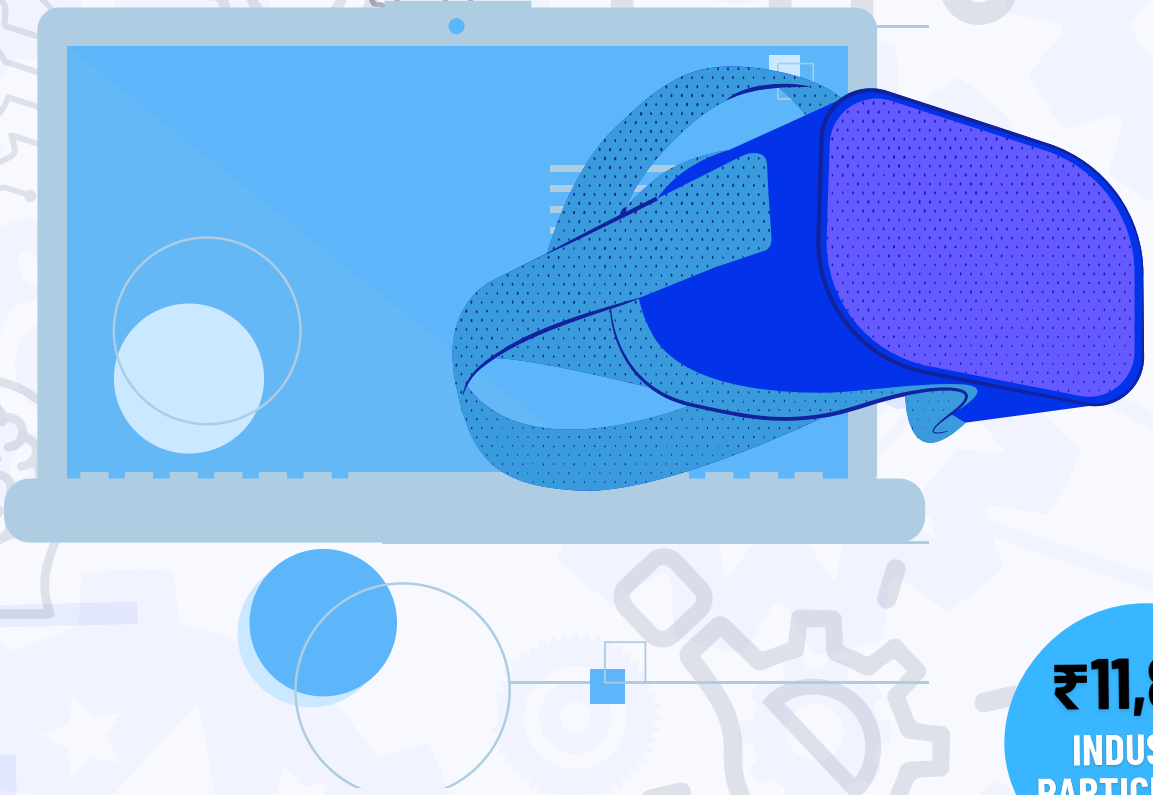

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REGISTER NOW!

₹11,800 INDUSTRY PARTICIPANTS

₹2,360 UG / PG STUDENTS

INCLUSIVE OF 18% GST

Developed and conducted by

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Foundation for Science Innovation and Development

ModeliCon INFOTECH

FACULTY MENTOR

PROF. PRAMOD KUMAR

Dept. of Mechanical Engineering,
Indian Institute of Science, Bengaluru

VENUE

CENTRE FOR CONTINUING EDUCATION

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11th - 12th APRIL 2025

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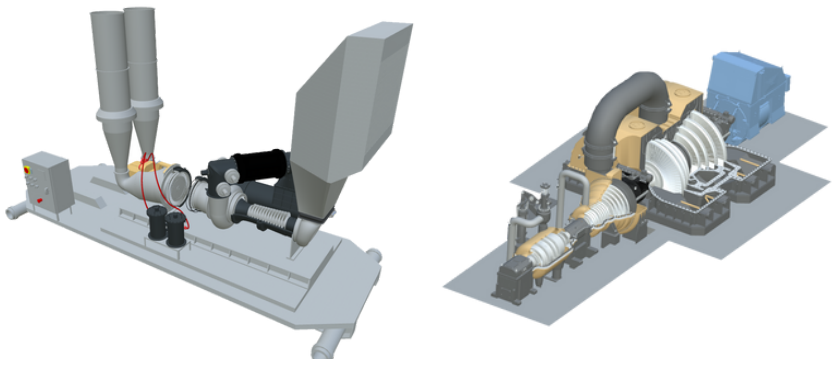
HIGHLIGHTS



3D Interactive

Virtual Reality

Hands-on tutorial

BACKGROUND

The Turbines Bootcamp course offers a comprehensive foundation on key concepts of rotating machinery in industrial applications, followed by detailed exposure to various types of Turbines.

Day-1 of the course is a refresher on fundamental aspects of rotating machinery; their types and characteristics; design, operation and maintenance considerations; material selection, and specific topics such as Tribology and Rotor Dynamics. The contents are arranged in a graded manner, from pre-requisites to more in-depth, main modules.

Building on this foundation, Day-2 covers the specific domain of Turbines. Participants learn about all aspects of Turbines, encompassing basic functions, applications, types, thermodynamic cycles, selection criteria, performance evaluation, operation, maintenance and fault diagnostics. The contents cover major categories of turbines, such as steam turbines, gas turbines and wind turbines.

This integrated approach ensures that participants gain comprehensive skills in rotating machinery fundamentals as well as Turbines.

OBJECTIVE

- Understand rotating machinery basics, including design approaches, rotor dynamics, tribological concepts, material selection, operation and maintenance and performance characteristics
- Understand machinery monitoring techniques, critical faults and diagnostics
- Learn about turbine types and their applications.
- Use thermodynamic cycles to analyze turbine performance
- Learn different variants of turbine configurations to cater to applications such as power generation, mechanical drive and process heating

KEY TAKEAWAYS

- Understand rotating machines, including types, mechanics, dynamics, materials, operation, maintenance and monitoring
- Classify turbines by their operating principles, construction, and applications for optimal selection
- Analyze turbine performance using thermodynamic cycles and approaches to optimize key performance parameters such as power output and efficiency
- Understand operation and maintenance aspects of turbines, including critical turbine fault conditions and methods of diagnostics

SCHEDULE

DAY 1

TIME	ACTIVITY	TIME	ACTIVITY
09:00 - 09:15	Inauguration	14:00 - 15:30	IIoT Concepts and Applications for Rotating Machinery
09:15 - 10:45	Foundation to Rotating Machinery Concepts (Part-1)	15:30 - 16:00	Foundation to Rotating Machinery Computations
10:45 - 11:00	3D Interactive Visualization of Foundation to Rotating Machinery	16:00 - 16:15	Tea Break
11:00 - 11:15	Tea Break	16:15 - 17:15	Guest Lecture - 1 (Dr. Barun Chakrabarti)
11:15 - 13:15	Foundation to Rotating Machinery Concepts (Part-2)	17:15 - 18:00	Virtual Reality Demo & Preview of Day 2
13:15 - 14:00	Lunch Break		

DAY 2

TIME	ACTIVITY	TIME	ACTIVITY
09:00 - 09:15	Recap of Day-1	13:15 - 14:00	Lunch Break
09:15 - 10:30	Turbine Concepts (Part-1)	14:00 - 15:30	Guest Lecture -2 (Prof. Pramod Kumar)
10:30 - 11:00	3D Interactive Visualization of Turbine		
11:00 - 11:15	Tea Break	15:30 - 16:00	Turbine Virtual Reality
11:15 - 12:45	Turbine Concepts (Part-2)	16:15 - 16:30	Tea Break
12:45 - 13:15	Turbine Computations	16:30 - 17:30	Assessment
		17:30 - 17:45	Closing Remarks

***Certification**: All attendees in the 2-Day In-person Course will receive a Participation Certificate. A Course Completion Certificate will be awarded to participants who successfully qualify in the online Assessment Test after the course.*

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