## Eligibility for Participants:

The faculty development programme is open to faculty members, research scholars, students and industry person belonging to engineering/ science disciplines.

Resource Persons:

Experts from IIT, NIT, and other esteemed institutions, along with researchers and industry professionals from India and overseas.

WELCOME TO

INDUSTRY 4.0
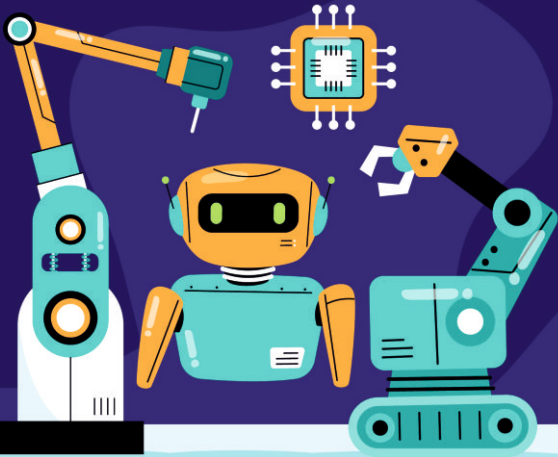
WELCOME TO
INDUSTRY 4.0

REGISTRATION

Registration Fee: Rs. 300/-

SCAN & PAY

https://shorturl.at/ACssL

Scan & Register

https://shorturl.at/joZsI

For Details Contact

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OPJU | NAAC A Accredited University | विकसित भारत अभियान 1947 TO 2047 | 10 YEARS of Imparting and Inspiring Academic Excellence

O. P. Jindal University, Raigarh
Department of Mechanical Engineering

Organizing

Faculty Development Program (FDP)

AI-DRIVEN ROBOTICS AND INDUSTRIAL AUTOMATION FOR INDUSTRY 4.0 TRANSFORMATION
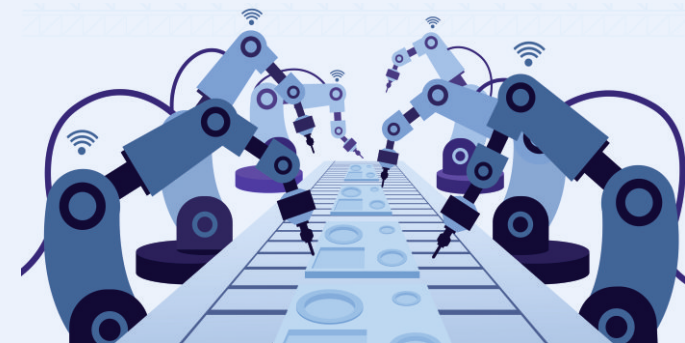
April 14-18, 2025

Online Mode

Patron
Dr. R. D. Patidar
Vice Chancellor

Chairman
Dr. Mahesh Bhiwapurkar
Professor & Vice Dean (Mechanical)

Convenor
Dr. Saroj Kumar
Sr. Assistant Professor, (Mechanical)

Co-Convenor
Dr. Dharmender Singh Saini
Assistant Professor, (Mechanical)

ABOUT THE UNIVERSITY

O.P. Jindal University (OPJU), Raigarh, was established in 2014 by the Jindal Education and Welfare Society, dedicated to fostering innovation, research, and global engagement, OPJU seeks to establish Chhattisgarh as an educational hub on the world stage. Accredited with an 'A' grade by NAAC, OPJU has garnered accolades including the AICTE-CII award for Best Industry Linked Emerging Engineering Institute and MHRD's honor as one of India's cleanest higher education institutions.OPJU offers comprehensive programs across its Schools of Engineering, Management, and Science, supported by 110+ global faculty on a 59-acre campus. The institution emphasizes practical knowledge, state-of-the-art facilities, and "learning by doing" methodologies, alongside mandatory internships.OPJU fosters holistic development, encouraging sports and extracurriculars to build teamwork, resilience, and confidence. As part of FICCI's Vision 2030, OPJU is poised to establish a world-class Skill Development Integrated Institution within three years, furthering its commitment to creating globally competent and socially responsible leaders in Technology, Management, and Science education.

ABOUT THE DEPARTMENT

The Mechanical Engineering Department is well known for its quality of teaching and supportive environment provided to the students. The state-of-the-art laboratories, highly qualified, experienced and dedicated faculty members in all specializations of Mechanical Engineering, make this Department a vibrant place to study. Our programs provides flexible curriculum enabling the students to achieve their goals and make them industry ready. Presently department is active in various thrust areas of research in Mechanical Engineering and allied branches.

The Department organizes number of short term training programs, workshop and seminars from time to time for faculties and students for sharing and updating their technical knowledge in a regular and periodic manner. The programs are not only imparting technical expertise to the students but also are intended to provide a professional experience through industry linked projects, in-plant trainings, industry personnel expert lectures and industrial visits. The Department fosters a culture of innovative teaching methodologies to improve the skills required for the student's career.
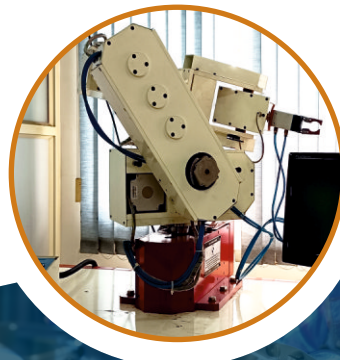
OBJECTIVES OF FDP

The primary objective of this Faculty Development Program is to provide participants with a comprehensive understanding of the role of Artificial Intelligence (AI), Robotics, and Industrial Automation in transforming traditional manufacturing and industrial processes into smarter, more efficient, and interconnected systems under the Industry 4.0 paradigm.

THE PROGRAM AIMS TO:
- Provide a comprehensive overview of AI, robotics, and industrial automation in the context of Industry 4.0.
- Introduce cutting-edge tools, technologies, and frameworks used in smart manufacturing and intelligent systems.
- Enhance participants & skills through interactive sessions and demonstrations in a virtual learning environment.
- Enable faculty members to integrate Industry 4.0 concepts into academic teaching, research, and projects.
- Promote interdisciplinary thinking and collaboration in addressing challenges in automation and smart industries.

POSSIBLE TOPICS

- Introduction to Industry 4.0: Key Technologies and Trends
- Artificial Intelligence in Robotics and Automation
- Machine Learning and Deep Learning for Industrial Automation
- IoT and Cyber-Physical Systems in Smart Manufacturing
- Robot Kinematics and Motion Planning for Industrial Applications
- Digital Twin Technology for Industrial Automation
- AI-Driven Predictive Maintenance in Industry 4.0
- Human-Robot Collaboration in Smart Factories
- Big Data Analytics and Cloud Computing for Industrial Systems
- Cybersecurity in Industrial Automation and Industry 4.0