

About FDP

The manufacturing sector is undergoing a significant transformation with the beginnings of Industry 4.0 and Industry 5.0, driven by smart technologies, automation, and sustainability. Industry 4.0 mainly focuses on digitalization, Internet of Things (IoT), Artificial Intelligence (AI) and cyber physical system whereas Industry 5.0 builds upon Industry 4.0, emphasizing human centric innovation, sustainable and resilient manufacturing, improve productivity and enhance flexibility. However, deploying these technologies raises problems such as high implementation costs, interoperability, cyber security threats, and the requirement for skilled workforce. This FDP aims to provide faculty members, researchers, and industry professionals with knowledge of smart and sustainable manufacturing practices, their challenges, and how to leverage Industry

Objectives of FDP

- ❖ To equip faculty and researchers with knowledge and skills in Industry 4.0/5.0 technologies, focusing on smart manufacturing and sustainable practices, ultimately leading to improved teaching, research, and industry-academia collaboration.
- ❖ To create awareness about Industry 4.0/5.0 and its sustainable approaches among academia
- ❖ To create connection between Industry and academia with modern technological change and enhance collaboration opportunities with industry and academia
- ❖ To explore impact of Industry 4.0/5.0 on smart manufacturing
- ❖ To identify challenges faced in implementing smart sustainable systems in manufacturing sectors
- ❖ To equip participants with skill and tools to integrate smart technologies in Teaching and research

Topic Covered

- ❖ Smart Manufacturing and Sustainable Manufacturing Practices
- ❖ Additive Manufacturing
- ❖ Industry 4.0 systems in manufacturing industry and manufacturing systems challenges and opportunities
- ❖ Digital transformation in Manufacturing
- ❖ Product life cycle management
- ❖ Big data and Data processing in manufacturing system
- ❖ Hands-on Sessions & Case Studies

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Eminent Speakers for FDP

- ❖ **Dr. Milind Akarte**, Professor, IIM Mumbai
- ❖ **Dr. S. N. Chougule** Professor, COEP, Pune
- ❖ **Dr. S.S. Pardeshi**, Associate Professor, COEP, Pune
- ❖ **Dr. Jyoti V Meghane**, Associate Professor, SVNIT, Surat
- ❖ **Dr. Shreyannshu Pardhi**, Assistant Professor, IMI Bhubaneswar
- ❖ **Dr. Mandar Bhanushe**, Professor, Mumbai University.
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- ❖ **Er. Vinand Arbale**, Founder & Director, Vinvent Teknow, Pune
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All India Council for Technical Education

AICTE's Training and Learning (ATAL) Academy

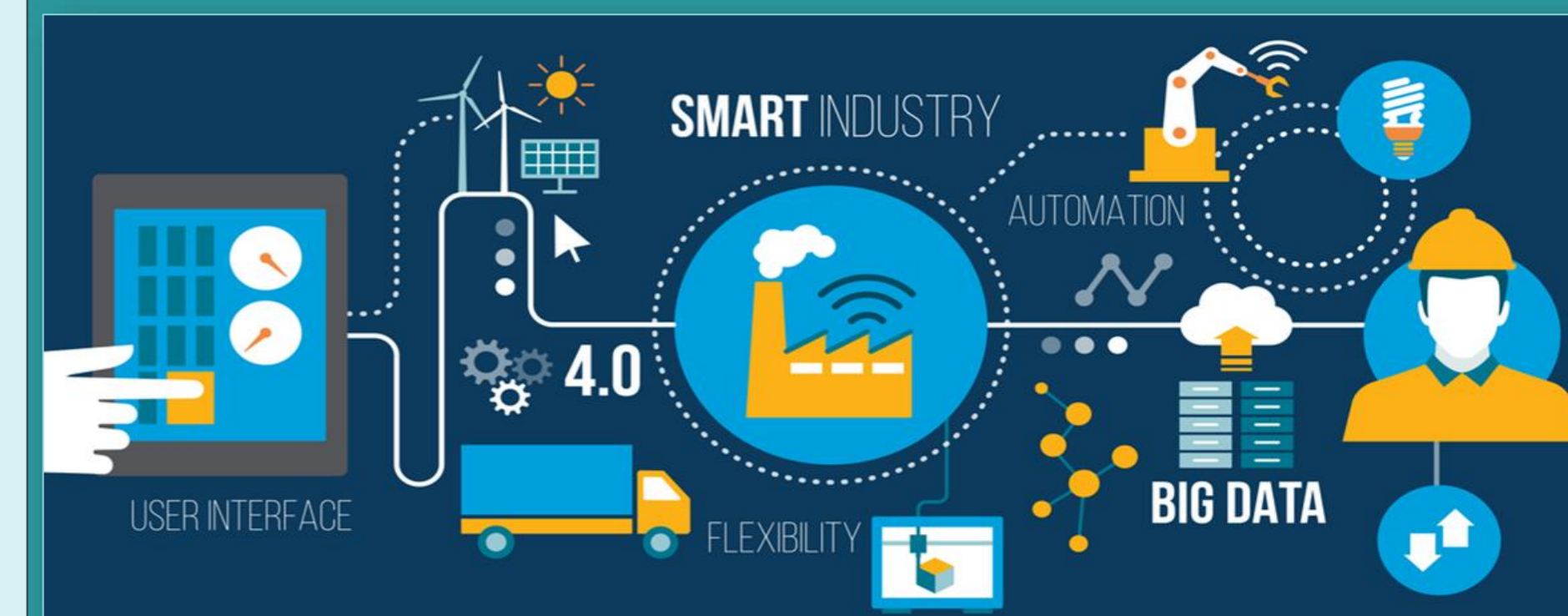
Supported
One-week

Faculty Development Program (FDP)

on

“Smart and Sustainable Manufacturing in Industry 4.0/5.0: Challenges and Opportunities”

On 15th – 20th Dec 2025



Jointly Organized by

SPSPM's

SKN Sinhgad College of Engineering, Korti

Pandharpur,

Department of Mechanical Engineering

(Accredited By NBA)

District-Solapur, Maharashtra,

Pin- 413 304

www.sknscoe.ac.in

About Institute

SKN Sinhgad College of Engineering is housed in beautiful campus of 20 acres and developed under dynamic leadership of Hon'ble Prof. M. N. Navale. The Institute offers five B. Tech., four M. Tech. and two Ph. D. degree courses in Engineering and Technology under Punyashlok Ahilyadevi Holkar Solapur University, Solapur. Since its establishment, the institute has made considerable progress in the field of Engineering education and research. As a result of this, the institute is accredited with 'A+' grade by NAAC, Additionally, our Mechanical Engineering, Civil Engineering, and Electronics & Telecommunication Engineering (ENTC) programs are accredited by the NBA. The institute ensures the overall development of students through well-defined teaching learning process and skill based activities. Students will have an exposure for experiential learning through value based Education and on campus projects. The team of faculty members of SKNSCOE are committed to prepare our students as tomorrow's leaders to match the need of fast changing world under the guidance of Dr. Kailash J. Karande, Principal, SKNSCOE. The campus of SKNSCOE is fully residential with excellent infrastructure and facilities. The institute has highly qualified and experienced faculty, technical staff and state of art laboratories for all programs. Seminar Guest Lectures and workshop are conducted on regular basis to keep appraised with latest in the field. IIC activities are conducted to nurture innovation, entrepreneurship startup and IPRs. Our students regularly bag prizes for project and programming contexts.

Mechanical Engineering Department

"The Mechanical Engineering Department at SKN Sinhgad College of Engineering started its four-year Bachelor's program in the academic year 2010-11. The primary focus of our curriculum is to develop a leading technical education and research center in mechanical engineering, producing competent professionals with ethical standards for the betterment of industry and society. Our department is imparting quality technical education through an effective teaching-learning process, faculty empowerment, and a conducive learning environment. The undergraduate Mechanical Engineering program is accredited by NBA, ensuring excellence in education and continuous improvement. To foster research and to prepare engineers for professional practice, the department presently offers programs at the Master's level. The postgraduate course, with a specialization in Design Engineering, was started in 2012-13 and, like its undergraduate program, is fully government-recognized, approved by AICTE and Punyashlok Ahilyadevi Holkar Solapur University, Solapur. Recently, our department has been approved as a PhD Center by PAH Solapur University.

About ATAL

"Higher education is undergoing a transformative phase to adapt to global changes, with the National Education Policy (NEP) 2020 serving as a guiding framework for this evolution. A community of well-qualified and skilled educators plays a crucial role in this transformation by fostering knowledge development and dissemination. In the current scenario, with rapid technological advancements, the role of higher education teachers has become more vital than ever. To support this, the All India Council for Technical Education (AICTE) has launched the AICTE Training and Learning (ATAL) Academy, which aims to empower faculty members by providing training in emerging areas. The ATAL Faculty Development Program (FDP) is designed to enhance the skills and knowledge of educators, researchers, and academic professionals across various domains, ensuring they stay at the forefront of educational and technological innovation."

Objectives of AICTE Training and Learning (ATAL) Academy

- Establish an academy to plan and facilitate the delivery of quality technical education across the country.
- Support technical institutions in fostering research, innovation, and entrepreneurship through specialized training programs.
- Empower technical teachers and technicians by leveraging Information & Communication Technology (ICT).
- Utilize the SWAYAM platform and other digital resources for effective training delivery.
- Provide diverse opportunities for professional development through workshops, orientations, learning communities, peer mentoring, and other faculty development programs.
- Assist policymakers in integrating training initiatives based on evolving educational and industry requirements.

Who should Attend ?

- Faculty members (Associate professor/ Asst. Professor) from AICTE-approved institutions, research scholars, postgraduate (PG) scholars, and industry professionals nominated by their institution heads are eligible to participate in FDP.
- The FDP can accommodate a maximum of 50 participants and a minimum of 30 participants.
- ATAL FDPs are free, and no fee will be charged from any participants

Travel Expenses & Accommodation

- External Participants will also get a lump sum Travelling allowance subject to travelling more than 20 Km one side and attending at least 90% of the sessions.
- Complimentary refreshments and working lunch will be provided. Outstation participants may request accommodation in the SKNSCOE Boys/Girls hostel on a nominal chargeable basis.

Registration Process

- Eligible participants must register through the ATAL portal at

<https://atalacademy.aicteindia.org/signup>

OR

simply scan the QR code & complete your registration effortlessly!



Registration is completely free.