

**AICTE Training and Learning
(ATAL) Online 6 Days
Faculty Development Programme (FDP)
On
Industry 4.0: Transforming manufacturing
with advanced technologies**



3rd Nov 2025 – 8th Nov 2025



Patron

Prof (Dr.) B. D. Sahoo
Director, IGIT Sarang

Course Coordinator

Prof. A.B. Pattnaik
MME, IGIT Sarang

Course Co-Coordinator

Prof. (Dr.) Ipsa Tripathy
MME, IGIT Sarang

OBJECTIVE OF THE COURSE

The proposed FDP is aimed at providing participants with a valuable opportunity to engage with leading experts from industries and faculties from top academic institutions. The sessions will be delivered by experienced specialists with significant teaching and practical knowledge, offering deep insights into the latest advancements. This FDP is designed for faculty members, researchers, undergraduate, post graduate students, and industry professionals, particularly those involved in or planning research related to Industry 4.0 and advanced manufacturing technologies.

COURSE CONTENTS

- Challenges of Industry 4.0 Adoption
- Driving Profitability in Manufacturing through real time information
- Responsible Use of Artificial Intelligence
- Machine Learning in automation
- Application of Deep Learning Approach
- Data Driven Modelling in Cold Rolling and Hot Dip Galvanizing Coatings
- Next generation of smart coatings for roofing applications
- Productivity, Quality, and Safety Enhancement through Digitalization and Data Analytics in Aluminium Smelter
- Recent advances in decarbonisation efforts for steelmaking
- Innovativeness in producing Ultra High Strength Steels for automotive applications
- New generation of welding consumables
- Synthesis of composites through advanced manufacturing technologies

ABOUT ATAL ACADEMY

Online ATAL academy is established with a vision to empower faculty to achieve goals of Higher Education such as access, equity and quality. The academy also help in imparting quality technical education in the country and support technical institutions in fostering research, innovation and entrepreneurship through training.

ELIGIBILITY OF PARTICIPANTS

Online ATAL FDP is open to regular faculty members of AICTE or UGC recognized educational institutions, technical universities/deemed universities and other research/ training institutions, Research Scholars, PG students and participants from Government, Industry (Bureaucrats/Technicians etc.).

REGISTRATION DETAILS

- ❑ **"No Charge for Registration, Course and Certification"** as the programe is sponsored by AICTE Training and Learning (ATAL) Academy.
- ❑ Interested participants can register using the following link:
<https://atalacademy.aicte-india.org/login>

Step 1: Sign-Up

Step 2: Select the Role 'Participant'

Step 3: Click on Workshops

Step 4: Select 'Faculty Development Programme on Industry 4.0: Transforming manufacturing with advanced technologies'.

Step 5: Click the plus sign button to register.

Participants will be selected on first come first serve basis.

RESOURCE PERSONS

Eminent faculties and Researchers from IITs, CSIR units and experts from industrial sectors such as Steel, Aluminium, Welding, Consulting, and Healthcare in India with experts from abroad.

ABOUT IGIT SARANG

Indira Gandhi Institute of Technology (IGIT), Sarang was established in the year of 1982 and was managed directly by the Govt. of Odisha in the name of Odisha College of Engineering (OCE). Within a span of three decades, the institute has grown up to the National level academically. This is the first Govt. Engg. College in the state to have accreditation from NBA (AICTE) because of its academic excellence. The serene atmosphere available at Sarang offers the students optimum opportunity to concentrate on studies. Priority is given through routine curricular programmes towards improvement of practical knowledge. To provide complete exposure to industrial life, the students are taken to nearby industrial organisations such as NALCO, NTPC/TTPS, MCL, NTPC, Rengali Dam Project, Samal Barrage, Heavy Water Project, Bhusan Steel & Strips, Rana Sponge, Nav Bharat Ferro Alloys Jindal Steel & Powers Ltd., etc., on weekends and holidays. Every effort is being made to improve various dimensions of student's personalities by conducting regular cultural programmes, technical exercises, athletic, sport and games and other co-curricular activities.

KEYPOINTS

- There is no Registration fee for any participant.
- The FDP will be conducted in online mode.
- Test will be conducted at the end of the programme.
- Participants will be selected on first come first serve basis. Selected candidates will be intimated by email only.
- The certificates will be issued to those participants who have attended the programme with minimum 80% attendance and scored minimum 60% marks in the test.
- Certificate will be issued by AICTE Training and Learning (ATAL) Academy.

ABOUT MME DEPARTMENT

Based on the commitment of the Institute to education, Metallurgical and Materials Engineering (MME) Department is focused on imparting learning based, practice oriented technical education in Metallurgical and Materials Engineering through active involvement of students with extensive theory and laboratory experiences as well as participation in project works, training programs and research activities. The vision is to provide students a broad education necessary to understand the impact of Metallurgical and Materials Engineering solutions in a global, societal, and environmental context. In the Department of Metallurgical and Materials Engineering, research work is being carried out in the areas of kinetics of metallurgical processes like sponge iron production, processing of advanced materials, development of ceramic cutting tools and structure and deformation studies of aluminium based alloys and composite materials. The department has set up an Advanced Materials Processing and Characterisation Laboratory with grants from AICTE under the MODROB Scheme in 2002-03.

ADDRESS OF CORRESPONDENCE

ORGANIZING COMMITTEE

Dr. P. K. Mallik
Dr. Sandeep Kumar Sahoo
Dr. Jogendra Majhi
Mr. Adityaprasad Sahoo
Mr. Bhabani Prasad Sahoo
Mr. Himashu Sahoo
Mr. Utpal Roy

SUPERVISORY COMMITTEE

Dr. Swarnalata Behera, HOD
MME, IGIT Sarang
Dr. P. K. Pani, Dean (FARC),
IGIT Sarang
Dr. B. B. Choudhary, HOD
ME, IGIT Sarang
Dr. S. Mishra, HOD
CSEA, IGIT Sarang
Dr. T. K. Nath, HOD
Civil Engineering, IGIT Sarang
Dr. P. Das, HOD
EE, IGIT Sarang
Dr. Ashima Rout, HOD
ETC Engineering, IGIT Sarang
Dr. D. K. Behera, HOD
Production Engg., IGIT Sarang

Prof. Amulya Bihari Pattnaik
(Course Coordinator)

Assistant Professor,
Indira Gandhi Institute of Technology
Sarang, Dhenkanal, Odisha.
Phone No.: 7381972239
E-mail: amulyapattnaik@gmail.com, Exp : 11 years



Dr. Ipsa Tripathy
(Course Co- Coordinator)

Assistant Professor,
Indira Gandhi Institute of Technology
Sarang, Dhenkanal, Odisha.
Phone No.: 9556085464
E-mail: ipsatripathy.igit@gmail.com, Exp. : 8 years



Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
6:00PM to 6:30PM	6:00PM to 7:30PM	5:00PM to 6:00PM	6:00PM to 7:30PM	6:00PM to 7:30PM	2:00PM to 3:30PM
Inaugural Session	Session 3	Exhibition on Synopsys Simpleware	Session 7	Session 9	Session 11
	Topic: Synthesis of composites through advanced manufacturing technologies Name of the Expert: Dr. Silani Sahoo Designation & Organization: Principal Scientist, Department of Advanced Materials Technology, CSIR-IMMT Bhubaneswar. Years of Exp: 15 years	Topic: Capabilities and applications of Synopsys Simpleware (An advanced software solution) Name of the Organization: Integrated Microsystem C-210, Basement, Mayfield Gardens, Sector-50, GURGAON-122018, Haryana.	Topic: Responsible Use of Artificial Intelligence Name of the Expert: Mr. Manvendra Ravi Designation & Organization: Sr Manager, United Health Group Years of Exp: 10+ years	Topic: Machine Learning in automation Name of the Expert: Mrs. Aparajita Pati Designation & Organization: Senior Project Manager, Infosys Technologies. Years of Exp: 20+ years	Topic: Recent advances in decarbonisation efforts for steelmaking Name of the Expert: Dr. Suneeti Purohit Designation & Organization: Research Scientist, Mineral Resources, CSIRO, Clayton South 3169, Victoria, Australia Years of Exp: 10+ years
6:30PM to 8:00PM	7:30PM to 9:00PM	6:00PM to 7:30PM	7:30PM to 9:00PM	7:30PM to 9:00PM	3:30PM to 5:00PM
Session 1	Session 4	Session 5	Session 8	Session 10	Session 12
Topic: Challenges of Industry 4.0 Adoption Name of the Expert: Mr. Sabyasachi Bandyopadhyay Designation & Organization: Executive Director, Jindal Steel and Power Raigarh Years of Exp: 30+ years	Topic: High Temperature aluminium alloys Name of the Expert: Prof. Animesh Mandal Designation & Organization: Professor, HoS School of Minerals, Metallurgical & Materials Engineering, Indian Institute of Technology Bhubaneswar Years of Exp: 15 years	Topic: Application of Deep Learning Approach Name of the Expert: Prof. Krishanu Biswas Designation & Organization: Ranjit Singh Chair Professor, Department of Materials Science and Engineering, Indian Institute of Technology Kanpur Years of Exp: 25 years	Topic: Productivity, Quality and Safety Enhancement through Digitalization and Data Analytics in Aluminium smelter Name of the Expert: Mr. Suryakant Nayak Designation & Organization: Deputy General Manager, Head, Smelter Improvement Cell, Hindalco Industries Limited Years of Exp: 18 years	Topic: Data Driven Modelling in Cold Rolling and Hot Dip Galvanizing Coatings Name of the Expert: Dr. Amiy Srivastava Designation & Organization: Manager Technical, Hot Rolled and Finishing, Stelco Inc., Hamilton, Ontario, Canada. Years of Exp: 12 years	Topic: Innovativeness in producing Ultra High Strength Steels for automotive applications Name of the Expert: Prof. Shiv Brat Singh Designation & Organization: Professor, Head, Metallurgical and Materials Engineering, Indian Institute of Technology Kharagpur Years of Exp: 25+ years
8:00PM to 9:30PM		7.30 PM to 9 PM			5:00PM to 6:30PM
Session 2		Session 6			Session 13
Topic: Driving Profitability in Manufacturing through real time information Name of the Expert: Mr. Sambit Mishra Designation & Organization: Senior Manager, People Consulting, EY India. Years of Exp: 14 years		Topic: Next generation of smart coatings for roofing applications Name of the Expert: Prof. Smrutiranjana Parida Designation & Organization: Professor, Metallurgical Engineering and Materials Science, Indian Institute of Technology Bombay. Years of Exp: 16 years			Topic: New generation of welding consumables Name of the Expert: Dr. Suresh Telu Designation & Organization: Vice President - Research & Development, D & H Secheron Electrodes Pvt. Ltd., Indore. Years of Exp: 11+ years
					6:30PM to 7:30PM
					Online test & feedback
					7:30PM to 8:00PM
					Valedictory Session

Experts from Academia and Industries

