# About the School of Engineering, Seacom Skills University and the Faculty Development Programme (FDP)

Seacom Skills University is a Multidisciplinary University with its flagship Programmes in Engineering; which is recognised by the UGC and was established in 2014 under the relevant West Bengal Act for SSU having its Main Campus at Bolpur, West Bengal (Website: https://www.seacomskillsuniversity.ac.in). SSU's School of Engineering is focused on nurturing innovation and emerging technologies, and industry-aligned technical education with a commitment to academic rigor. With a strong emphasis on skill-based learning, the School of Engineering (SoE) offers programs at all levels including, B.Tech., M.Tech. and Ph.D. across a wide spectrum of engineering and technological domains namely, Computer Science and Engineering, Mechanical Engineering, Civil Engineering, Electrical Engineering, Electronics and Communication Engineering, extending to emerging technology areas. To meet the evolving demands of Industry 4.0 and the digital economy, the School offers cutting-edge specializations at both undergraduate and postgraduate levels in Artificial Intelligence (AI), Machine Learning (ML), Cyber Security and Data Science. The School is equipped with state-of-the-art laboratories, modern research facilities, and an industry-responsive curriculum, designed and delivered by a team of highly proficient and committed faculty members. As a reflection of its commitment to advancing professional development and fostering technological innovation, the SoE is delighted to organize the AICTE ATAL Faculty Development Programme (FDP) on "Manufacturing & Industry 4.0: Technologies and Applications." This program aims to equip faculty members and researchers with insights into next-generation technologies.

# **AWARDS & ACCOLADES**

- Seacom Skills University was awarded the Best Private University of the Year Eastern Region (2018) by ASSOCHAM India on 12th July 2018, in recognition of its excellence in higher education and significant contribution to skill-based learning.
- Seacom Skills University received recognition at the Inter Solar India Conference (2018), held from 11th–13th December 2018, during India's most pioneering exhibition and conference for the solar industry, for its initiatives and contributions in promoting renewable energy education and research.
- Seacom Skills University received Global Recognition in Post-Pandemic Education (2021) at the Global Interactive Session on Education in Post Pandemic World, organized by FICCI on 20th April 2021, for its innovative approaches and international collaborations in higher education.
- Seacom Skills University has established collaborations with the National Skills Development Council of India (NSDC) and the Board of Practical Training (Eastern Region) to enhance skill development and industry-oriented training.
- Seacom Skills University has set up a dedicated Innovation and Incubation Center (IIC) to foster innovation, entrepreneurship, and employability among students.
- Seacom Skills University has entered into Memoranda of Understanding (MoUs) with reputed international universities, including George Mason University (USA), Fayetteville State University (USA), Near East University (Cyprus), and Asia University (Taiwan).
- Seacom Skills University has adopted five neighbouring villages to organize skill training programs, entrepreneurship development workshops, and community welfare initiatives.
- Seacom Skills University has significantly contributed to regional development by assisting in the preparation of the District Annual Plan of Birbhum for consecutive years.
- Seacom Skills University has signed an MoU with the University of Eastern Finland (UEF), Joensuu, Finland, to promote academic exchange and research collaboration.
- Seacom Skills University has signed an MoU with the National Institute of Technical Teachers Training and Research (NITTTR), Chennai, to enhance faculty development and technical education.

# **PATRON**

Prof. (Dr.) Prabir Mukhopadhyay, Vice Chancellor, Seacom Skills University, Bolpur, West Bengal

# **CO-PATRONS**

Mr. Arpon Chakraborty & Ms. Kamolini Chakraborty Executive Directors, Seacom Group



### COORDINATOR

Prof. (Dr.) Pranab K. Dan,
Professor, Department of Mechanical Engineering

Pro Vice-chancellor (Accreditation, Research and Advanced Studies)
Seacom Skills University
Email: provcaras@seacomskillsuniversity.org



# **CO-COORDINATOR**

Dr. Pranab Kanti Roy,
Principal - School of Engineering,
Seacom Skills University
Email: principal.soe@seacomskillsuniversity.org

# **ORGANIZING COMMITTEE**

Dr. Sanjukta Chakraborty, Assistant Professor, Computer Science and Engineering

Mr. Subhadip Sarkar, Assistant Professor, Civil Engineering

Mr. Swaraj Dutta, Assistant Professor, Electrical Engineering

Mr. Anup Krishna Debnath, Assistant Professor, Mechanical Engineering

Ms. Suchismita Das, Assistant Professor, Electronics and Communication Engineering

Mr. Suraj Pal, Assistant Professor, Civil Engineering

Mr. Manas Kalyan Das, Assistant Professor, Civil Engineering

Mr. Sumit Sarkar, Assistant Professor, Civil Engineering

Mr. Baban Rajak, Assistant Professor, Mechanical Engineering

Mr. Abhijeet Goswami, Assistant Professor, Mechanical Engineering

Mr. Dip Kumar Kundu, Assistant Professor, Electronics and Communication Engineering

Mr. Manoj Dey, Assistant Professor, Electrical Engineering

Mr. Arkaprabha Chatterjee, Assistant Professor, Electrical Engineering

Mr. Subhajit Banerjee, Assistant Professor, Electrical Engineering

Mr. Amit Mondal, Assistant Professor, Electrical Engineering

Ms. Rika Ghosh, Assistant Professor, Computer Science and Engineering

Mr. Subhajit Mishra, Assistant Professor, Computer Science and Engineering

Mr. Sobhan Maity, Assistant Professor, Computer Science and Engineering

### **REGISTRATION LINK**

Participants are requested to register compulsorily in either of the following links or scan the following QR code:

https://www.aicte-india.org/atal

or

https://atalacademy.aicte-india.org/signup



# AICTE SPONSORED ONLINE ATAL FACULTY DEVELOPMENT PROGRAMME

on

# Manufacturing & Industry 4.0: Technologies and Applications

ORGANIZED BY: SCHOOL OF ENGINEERING
SEACOM SKILLS UNIVERSITY







# VISION-MISSION OF THE SCHOOL OF ENGINEERING: Vision:

To be a premier Centre imparting professional and skill-based education in engineering fostering social commitment while addressing contemporary critical challenges and beneficial emerging technologies.

# **Mission:**

- To provide holistic education in engineering for solving realworld problems to address societal needs.
- To inculcate analytical capability and creativity in graduates to be industry-ready with innovative mind-set.
- To generate new knowledge by engaging in emerging technology research and to promote academic growth by offering state-of-the-art programmes
- To undertake collaborative projects creating opportunities for sustained academia-industry interaction.
- To instill in students and scholars the spirit of innovation and entrepreneurship through experiential learning.

# MAIN OBJECTIVES OF THE ATAL FDP:

- To familiarize faculty with the latest Industry 4.0 trends by introducing them to core concepts, tools, and evolving practices, ensuring they stay updated with global technological advancements.
- To demonstrate applications of smart manufacturing and digital transformation by exploring, through expert-led sessions and case studies, how advanced digital technologies are integrated into real-world manufacturing systems for improved productivity and efficiency.
- To build capacity for effective teaching, research, and innovation in this domain by enhancing the pedagogical skills of faculty, enabling them to design innovative curricula, guide impactful research, and foster entrepreneurial thinking in emerging technologies.

# **ABOUT THE ATAL FDP**

This ATAL FDP is designed to equip participants with astute insights into Industry 4.0 (i4.0) and its growing influence on modern industries including manufacturing, encompassing logistics, supply chain and other evolving applications. It will explore how smart technologies like smart manufacturing, industrial automation, AI integration in production systems, AI/ML in predictive maintenance, digital twins and edge computing, cyberphysical systems (CPS), industrial IoT, robotics, cyber security and Blockchain for smart factories, cloud computing, pillars of i4.0, Industry 5.0 transition, and sustainable practices in modern industries. Through this initiative, this FDP organized by Seacom Skills University's School of Engineering aims to play a pivotal role in preparing future-ready engineering & technology faculty resources, capable of leading to a digitally transformed, sustainable world.

# **ELIGIBILITY**

The faculty members & Research Scholars, PG Scholars of AICTE approved institutions and Industry personnel.

# **GUIDELINES**

- The coordinators will conduct a test at the end of the program.
- The certificates will be issued to those participants who have attended the program with a minimum 80% attendance and scored a minimum of 60% marks in the test.

**MODE:** Live web Session through Online Cisco WebEx Platform

# **CONTACT DETAILS:-**

**Mr. Suraj Pal** - surajpaloffice3196@gmail.com/ +91 97753 83621/ +91 89186 49067, Assistant Professor, Civil Engineering

**Ms.** Suchismita Das - suchismitadas773@gmail.com/ +91 87688 36657, Assistant Professor, Electronics and Communication Engineering

Mr. Manas Kalyan Das - manaskalyandas3@gmail.com/ +91 87775 85281, Assistant Professor, Civil Engineering

Mr. Dip Kumar Kundu - dipkumar37000@gmail.com/ +91 89065 30672, Assistant Professor, Electronics and Communication Engineering

Registration is free for All

# RESOURCE PERSONS



Prof. (Dr.) Kaushal A. Desai Professor, IIT Jodhpur



Mr. Aashish Kumar Lead Design Engineer, Tata Elxsi



Dr. Tamal Ghosh Associate Professor, Adamas University



Dr. Anirban Kundu Co-Founder, DSZ Innovation Labs



Dr. Jaikishan Soman Method Specialist st, Lufthansa Systems GmbH & Co., Hesse Germany



Dr. Sarbani Ghose Founder, DSZ Innovation Lab



Prof. (Dr.) Pranab K Dan
Pro-VC, Seacom Skills University



Dr. Prabir Sarkar Professor, IIT Ropar



Dr. Sourav Sengupta
Assistant Professor, Trinity Business
School, Dublin, Ireland



Prof. (Dr.) Suril V. Shah Professor, IIT Jodhpur



Dr. Padmalochan Bera Associate Professor, IIT Bhubaneswar



Dr. Sireesha Tamada Automotive Developer, TCS



Prof. Dr. Sajal Saha Professor, Adamas University



Riti Chatterjee Managing Director, Plumule Research L.L.P

# ATAL Online 6-Day Faculty Development Program (FDP) 2025–26 Schedule

FDP Thrust Area: Industry 4.0

FDP Title: Manufacturing &Industry 4.0: Technologies and Applications

Start Date: 08/12/2025

End Date: 13/12/2025

Day 2: Smart Manufacturing & IoT	Day 3: Artificial Intelligence in I4.0	Day 4: Data Analytics & Cybersecurity	Day 5: Sustainability & Green Tech in Industry 4.0	Day 6: Applications, Policy & Future Outlook
6:00 PM to 7:30 PM Session 3 Topic: Cyber-Physical Systems (CPS), Industrial IoT Name of the Expert: Mr. Aashish Kumar Designation & Organization: Lead Design Engineer, Tata Elxsi Years of Exp: 14	6:00 PM to 7:30 PM Session 5 Topic: AI/ML in predictive maintenance Name of the Expert: Dr. Tamal Ghosh Designation & Organization: Associate Professor, Adamas University Years of Exp: 13+	6:00 PM to 7:30 PM Session 7 Topic: Big data in manufacturing Name of the Expert: Dr. Anirban Kundu Designation & Organization: Co- Founder, DSZ Innovation Labs Years of Exp: 10+	6:00 PM to 7:30 PM Session 9 Topic: Optimization and Industry 4.0 Name of the Expert: Dr. Jaikishan Soman Designation & Organization: Method Specialist st, Lufthansa Systems GmbH & Co., Hesse Germany Years of Exp: 10+	2:00 PM to 3:30 PM Session 11 Topic: 5G/6G, Cloud Computing Name of the Expert: Dr. Sarbani Ghose Designation & Organization: Founder, DSZ Innovation Lab Years of Exp: 10+
7:30 PM to 9:00 PM Session 4 Topic: Digital twins and edge computing Name of the Expert: Dr. Sourav Sengupta Designation & Organization: Assistant Professor, Trinity Business School, Dublin, Ireland Years of Exp: 5+	7:30 PM to 9:00 PM Session 6 Topic: quality assurance, robotics process automation Name of the Expert: Prof. (Dr.)Suril V. Shah Designation & Organization:Professor, IIT Jodhpur Years of Exp: 14	7:30 PM to 9:00 PM Session 8 Topic: cybersecurity and blockchain for smart factories Name of the Expert: Dr. Padmalochan Bera Designation & Organization: Associate Professor, IIT Bhubaneswar Years of Exp: 14	7:30 PM to 9:00 PM Session 10 Topic: energy-efficient systems, smart grids Name of the Expert: Dr. Sireesha Tamada Designation & Organization: Automotive Developer, TCS Years of Exp: 13+	3:30 PM to 5:00 PM Session 12 Topic: Cloud Computing Name of the Expert: Prof. Dr. Sajal Saha Designation & Organization: Professor, Adamas University Years of Exp: 21+
				5:00 PM to 6:30 PM Session 13 Topic: Smart cities, healthcare, human aspects and factors, policy frameworks, Industry 5.0 transition Name of the Expert: Prof. Dr. Pranab K Dan Designation & Organization: Pro-VC, Seacom Skills University Years of Exp: 30+ and Ms. Riti Chatterjee, Managing Director, Plumule Research LLP
				6:30 PM to 7:30 PM Online Test and Feedback by a Panel of Experts (Coordinated by Dr. Pranab Kanti Roy, Associate Professor, Mechanical Engineering & Principal, School of Engineering, Seacom Skills University 7:30 PM to 8:00 PM
	6:00 PM to 7:30 PM Session 3 Topic: Cyber-Physical Systems (CPS), Industrial IoT Name of the Expert: Mr. Aashish Kumar Designation & Organization: Lead Design Engineer, Tata Elxsi Years of Exp: 14  7:30 PM to 9:00 PM Session 4 Topic: Digital twins and edge computing Name of the Expert: Dr. Sourav Sengupta Designation & Organization: Assistant Professor, Trinity Business School, Dublin, Ireland	6:00 PM to 7:30 PM Session 3 Topic: Cyber-Physical Systems (CPS), Industrial IoT Name of the Expert: Mr. Aashish Kumar Designation & Organization: Lead Design Engineer, Tata Elxsi Years of Exp: 14  7:30 PM to 9:00 PM Session 4 Topic: Digital twins and edge computing Name of the Expert: Dr. Sourav Sengupta Designation & Organization: Assistant Professor, Trinity Business School, Dublin, Ireland  6:00 PM to 7:30 PM Session 5 Topic: AI/ML in predictive maintenance Name of the Expert: Dr. Tamal Ghosh Designation & Organization: Associate Professor, Adamas University Years of Exp: 13+  7:30 PM to 9:00 PM Session 6 Topic: quality assurance, robotics process automation Name of the Expert: Prof. (Dr.)Suril V. Shah Designation & Organization: Professor, IIT Jodhpur Years of Exp. 14	6:00 PM to 7:30 PM Session 3 Topic: Cyber-Physical Systems (CPS), Industrial IoT Name of the Expert: Mr. Aashish Kumar Designation & Organization: Lead Design Engineer, Tata Elxsi Years of Exp: 14  7:30 PM to 9:00 PM Session 4 Topic: Digital twins and edge computing Name of the Expert: Dr. Sourav Sengupta Designation & Organization: Assistant Professor, Trinity Business School, Dublin, Ireland  6:00 PM to 7:30 PM Session 7 Topic: Big data in manufacturing Name of the Expert: Dr. Anirban Kundu Designation: Associate Professor, Adamas University Years of Exp: 13+  7:30 PM to 9:00 PM Session 4 Topic: Digital twins and edge computing Name of the Expert: Dr. Sourav Sengupta Designation & Organization: Assistant Professor, Trinity Business School, Dublin, Ireland  6:00 PM to 7:30 PM Session 7 Topic: Big data in manufacturing Name of the Expert: Dr. Anirban Kundu Designation: Associate Professor, Adamas University Years of Exp: 13+  7:30 PM to 9:00 PM Session 6 Topic: quality assurance, robotics Professor, IT Bhubaneswar Years of Exp: 14  7:30 PM to 7:30 PM Session 7 Topic: Big data in manufacturing Name of the Expert: Dr. Anirban Kundu Designation & Organization: Co-Founder, DSZ Innovation Labs Years of Exp: 10+  7:30 PM to 9:00 PM Session 6 Topic: quality assurance, robotics Professor, IT Jodhpur Years of Exp: 14  7:30 PM to 9:00 PM Session 8 Topic: cybersecurity and blockchain for smart factories Name of the Expert: Dr. Padmalochan Bera Designation & Organization: Associate Professor, IT Bhubaneswar Years of Exp: 14	6:00 PM to 7:30 PM Session 3 Topic: Cyber-Physical Systems (CPS), Industrial IoT Name of the Expert: Mr. Aashish Kumar Designation & Organization: Lead Design Engineer, Tata Elxsi Years of Exp: 14  7:30 PM to 9:00 PM Session 6 Topic: Digital twins and edge computing Name of the Expert: Dr. Sourav Sengupta Designation & Organization: Assistant Professor, Trinity Business School, Dublin, Ireland  6:00 PM to 7:30 PM Session 7 Topic: Big data in manufacturing Name of the Expert: Dr. Anirban Kumdu Designation & Organization: Associate Professor, Adamas University Years of Exp: 13+  7:30 PM to 9:00 PM Session 6 Topic: quality assurance, robotics Process automation Name of the Expert: Dr. Padmalochan Bera Designation & Organization: Associate Professor, Trinity Business School, Dublin, Ireland  6:00 PM to 7:30 PM Session 7 Topic: Big data in manufacturing Name of the Expert: Dr. Anirban Kundu Designation & Organization: Co-Founder, DSZ Innovation Labs Years of Exp: 10+  7:30 PM to 9:00 PM Session 8 Topic: cybersecurity and blockchain for smart factories Name of the Expert: Dr. Padmalochan Bera Designation & Organization: Associate Professor, Tirnity Business School, Dublin, Ireland  6:00 PM to 7:30 PM Session 7 Topic: Big data in manufacturing Name of the Expert: Dr. Anirban Kundu Designation & Organization: Co-Founder, DSZ Innovation Labs Years of Exp: 10+  7:30 PM to 9:00 PM Session 8 Topic: cybersecurity and blockchain for smart factories Name of the Expert: Dr. Padmalochan Bera Designation & Organization: Associate Professor, Tirnity Business Associate Professor, Tirnity Business Associate Professor, Tirnity Business Associate Professor, Tirnity Business Associate Professor, Firm 14  7:30 PM to 9:00 PM Session 8 Topic: cybersecurity and blockchain for smart factories Name of the Expert: Dr. Padmalochan Bera Designation & Organization: Associate Professor, Tirnity Business Associate Professor, Tirnity Business Associate Professor, Tirnity Business Associate Professor, Firm 14