Objective of ATAL FDP Scheme:

The objective of ATAL scheme is "To plan and help in imparting quality technical education in the country and to support technical institutions in fostering research, innovation and entrepreneurship through training in various emerging fields". Who should attend?

The Faculty Members of the AICTE approved institutions, research scholars, PG Scholars, participants from Government, Industry and staff of host institution can attend the FDP.

Guidelines

•Eligible participants will be selected based on first come first serve basis and will be intimated by e-mail only.

•On the last day of the program an assessment test will be conducted for all participants.

•E-certificate will be awarded only to those participants having minimum 80% attendance and scored minimum 60 % marks in the test conducted by the coordinator on the last day.

Registration Details:

- There is no registration fee.
- The last day of registration is
- Link for the registration: Participants are requested to register compulsorily in the following link:
- https://www.aicte-india.org/atal https://atalacademy.aicte.gov.in/signup

Session planning:

- Date: 14.07.2025-19.07.2025
- Timing: 9.30 am to 5.30 pm
- 25 hours of teaching in ten equal sessions.
- 05 hours of practical/labs/ experiential learning sessions of one hour each.
- 04 hours of article discussion of one hour each.
- 03 hours, each for MCQs, article summaryand feedback.
- 04 hours for Industrial visit



OBJECTIVES:

- To set up an Academy which will plan and help in imparting quality technical education in the country To support technical institutions in fostering research. innovation and entrepreneurship through training
- To stress upon empowering technical teachers & technicians using Information & Communication Technology
- To utilize SWAYAM platform and other resource for the delivery of trainings.
- To provide a variety of opportunities for training and exchange of experiences. Such as workshops, Orientations, learning communities, peer mentoring and other faculty development programmes.
- To support policy makers for incorporating training as per requirements.

VISION:

To empower faculty to achieve goals of Higher Education such as access, equity and quality.

To Contact

Program Coordinator Dr. L.Anojkumar, Associate Professor. **Department of Mechanical Engineering,** Jansons Institute of Technology Coimbatore. Ph:9943570353 anojkumar.l@jit.ac.in **Program Co-Coordinator** Dr. M.M.Matheswaran Associate Professor, Department of Mechanical Engineering, Jansons Institute of Technology Coimbatore. Ph: 9789757178 matheshwaran.m@jit.ac.in



AFFILIATED TO ANNA UNIVERSITY, CHENNAI AND APPROVED BY AICTE, NEW DELHI ACCREDITED BY NAAC 'A' AND AN ISO 9001:2015 **CERTIFIED INSTITUTION** NIRF INNOVATION RANKING: 151 TO 300 BAND (2023) COIMBATORE-641 659.



(OR)



AICTE Training and Learning (ATAL) Academy **Sponsored**

Faculty Development Program "Energy Efficiency and Sustainable Practices: Advancing

Green Technologies with Solar

Thermal Systems"

FDP Application Number: 1743140094

14.07.2025 - 19.07.2025

Organized by

DEPARTMENT OF MECHANICAL ENGINEERING JANSONS INSTITUTE OF TECHNOLOGY (AUTONOMOUS)

About the Institution:

Jansons Foundation reached another significant milestone by establishing the Jansons Institute of Technology in 2009. The institution benefits from its strategic location in close proximity to Coimbatore. Jansons Institute of Technology is approved by the All India Council for Technical Education (AICTE), New Delhi, and is affiliated with Anna University, Chennai. The institution is wellequipped with advanced infrastructural facilities and offers a variety of programs.

The undergraduate programs include B.E. in Computer Science and Engineering (CSE), Computer Science and Business Systems (CS&BS), Artificial Intelligence and Data Science (AI&DS), Electronics and Communication Engineering (ECE), Mechanical Engineering, and Civil Engineering. The postgraduate programs include M.E. in OUTCOME CSE, ECE, and Mechanical Engineering, along with PhD (FT/PT) in **Mechanical Engineering.**

From the academic year 2024-25, Jansons Institute of Technology has acquired autonomous status, enhancing its academic flexibility and curriculum development. The institute's Innovation Council has achieved a prestigious 4-star rating in both IIC 4.0 and IIC 5.0. Additionally, Jansons Institute of Technology has secured a place in the NIRF innovation ranking within the band of 151-300, reflecting its commitment to fostering innovation and excellence in technical education.

About the Department

The Mechanical Engineering department started in the year 2009 is well equipped with latest state-of-the-art laboratories and manned by highly qualified and experienced faculty members. The department has adopted latest teaching and learning processes like e-learning, Google apps, power point presentations, seminars, industrial visits, expert lectures from industry personnel etc.

We take special efforts to reduce the gap between Industry and Institute. Programme Offered

- B.E. Mechanical Engineering
- M.E. Computer Aided Design
- PhD. Mechanical Engineering

<u>Objective of the FDP:</u>

 Equip faculty members with advanced training and resources to conduct research in energy-related topics, focusing on renewable energy technologies, energy efficiency, and sustainable development practices.

- Encourage faculty to explore innovative solutions and technologies in the energy sector, targeting challenges such as climate change, energy access, and environmental sustainability.
- Provide faculty with the knowledge and tools to identify and capitalize on entrepreneurial opportunities in the energy sector, fostering the creation of startups that contribute to sustainable development.
- Createa collaborative platformfor faculty, industry experts, policymakers, and stakeholders to promote interdisciplinary research, technology transfer, and industry-academia partnerships in the energy sector

- Faculty produce high-quality research outputs, including publications, patents, and projects addressing key energy sector challenges and opportunities.
- Faculty develop and implement innovative solutions and technologies in their teaching, research, and outreach activities, driving positive change in the energy ecosystem.
- Faculty and students initiate and develop viable energy sector startups, leveraging research and innovation to address market needs and societal challenges.
- Faculty establish networks and partnerships with industry, government agencies, NGOs, and other stakeholders, facilitating knowledge exchange, technology transfer, and collaborative research for sustainable energy development.

Topics covered:

- Innovation Opportunities in Solar Thermal Sector for Industrial **Process Heating Applications**
- Cost-Effective Solar PV system and Controller design for Industrial and Rural Applications
- Technical Challenges and Business Opportunities in the restructured Solar energy Sector
- Analytical Modeling of Solar Thermal Systems
- Magnesium alloy casting, Alloy development and Light alloy composites making for Energy
- Leveraging Advanced Materials and Nanotechnology for **Innovations in Renewable Energy Systems**

- **Energy Sector**

- **Applications**

Resource Persons:

 Dr.T.V.ARJUNAN, Mr. VISHAL NAIR • Dr.S.Vijayan, Limited, Coimbatore Dr. L.ANOJKUMAR

 Attaining Market-Product Fit: Prototype Designing Process and Tools for Development of Minimum Viable Product (MVP) in

 Outcome-Based Research on Energy Efficiency and Sustainable Practices in Solar Thermal Systems and Green Technologies

• Research Methodology: How to write research articles to the reputed journal with the reference of Thermal Management of Green Data Centers and Design and Development of a Solar **Updraft Power Plant**

Advancements in Energy Storage for Industrial Process Heating

Professor/Mechanical, Guru Ghasidas Vishwavidyalaya (A CentralUniversity), Bilaspur, Chhattisgarh

· Dr. G.SARAVANA ILANGO,

Professor/EEE, National Institute of Technology, Tiruchirappalli Dr.V.P.CHANDRAMOHAN,

Professor/Mechanical, National Institute of Technology, Warangal Dr. ARJUNANRAGURAM

Director at Cares Renewables, Coimbatore

Dr. MOORTHIPICHUMANI

Professor & Head, Nano Science and Technology Sri Ramakrishna

Engineering College, Coimbatore

• Dr. K. K. Ajith Kumar, M.E., Ph.D (IIT), PDF.

CEO, MatRICS - (Materials Research and Innovation Centric Solutions), Kanyakumari.

WadhwaniFoundation, Bengaluru, Karnataka

Chief Technology Officer, Shiniunicorns Solar Technologies Private

Dr. M.M.MATHESWARAN

Associate Professor, Department of Mechanical Engineering, Jansons Institute of Technology, Coimbatore

Associate Professor, Department of Mechanical Engineering,

Jansons Institute of Technology, Coimbatore



ATAL FACULTY DEVELOPMENT PROGRAM SCHEDULE ORGANIZED BY **DEPARTMENT OF MECHANICAL ENGINEERING JANSONS INSTITUTE OF TECHNOLOGY** (AUTONOMOUS)

APPROVED BY AICTE, NEW DELHI AND AFFILIATED TO ANNA UNIVERSITY, CHENNAL ACCREDITED BY NAAC WITH A GRADE AND AN ISO 9001:2015 CERTIFIED INSTITUTION FDP APPLICATION NUMBER: 1743140094 COIMBATORE, TAMIL NADU-641659

TITLE OF THE FDP: ENERGY EFFICIENCY AND SUSTAINABLE PRACTICES: ADVANCING GREEN TECHNOLOGIES WITH SOLAR THERMAL SYSTEMS **START DATE : 14.07.2025**

| 14.07.2025 | 15.07.2025 | 16.07.2025 | 17.07.2025 | 18.07.2025 | 19.07.2025 |
|--|---|--|---|--|--|
| 9:00 – 9:30 Inauguration | | | | | |
| 9:30 – 12:00 Session 1 Dr.T.V.ARJUNAN Professor, Department of Mechanical Engineering, Former Head, Mechanical Engineering & Former Dean, SoS Engineering & Technology, Guru Ghasidas Vishwavidyalaya (A Central University), Bilaspur, Chhattisgarh. 20 Years of Experience in Research Innovation and Product Development. "Innovation Opportunities in Solar Thermal Sector for Industrial Process Heating Applications" | 9:30 – 12:00 Session 3 Dr. ARJUNAN RAGURAM President at Sustainability & Energy Practitioners Association, Managing Director at Cares Renewables Coimbatore, Tamil Nadu. 15 Year Experience in Business Development "Technical Challenges and Business Opportunities in the restructured Solar energy Sector". | 9:30 – 12:00 Session 4 Dr. M.M.MATHESHWARAN Associate Professor, Department of Mechanical Engineering, Jansons Institute of Technology Coimbatore 15 Years of Experience in Solar Thermal Design Analytical Modeling of Solar Thermal Systems | 9:30 – 12:00 Session 6 Dr. MOORTHI PICHUMANI DST INSPIRE Faculty Professor & Head, Nano Science and Technology Department at Sri Ramakrishna Engineering College, Coimbatore, Tamilnadu 15 Years of Experience in Teaching and Research Topic to be taught: "Leveraging Advanced Materials and Nanotechnology for Innovations in Renewable Energy Systems" | 9:30 – 12:00 Session 8 Dr.V.P.CHANDRAMOHAN Professor Department of Mechanical Engineering National Institute of Technology, Warangal - 506004, Telangana. 21 Years of Experience in Teaching and Research Outcome-Based Research on Energy Efficiency and Sustainable Practices in Solar Thermal Systems and Green Technologies | 9:30 – 12:00 Session 10 Dr.S.Vijayan,PhD.,PDF Chief Technology Officer Shiniunicorns Solar Technologies Private Limited Coimbatore 15 Years of Experience in Research Innovation in Energy Storage Advancements in Energy Storage for Industrial Process Heating Applications |
| 12:00 – 1:00 Article Discussion 1. Title of the Research Paper : Parametric study of evacuated tube collector solar air heater with inserted baffles on the thermal network for low-temperature applications 2. Name of the journal: Journal of Cleaner Production 3. Year of Publication: 2022 | 12:00 – 1.00 Hands on training Performance Analysis of Mixed Mode Greenhouse Dryer at Research and Product Development Lab | 12:00 – 1.00 Article Discussion 1. Title of the Research Paper: Assessment and enhancement of thermal performance for ring roughened finned jet impingement solar air heater for low-temperature applications 2. Name of the journal: Energy 3. Year of Publication: 2024 | 12:00 – 1:00 Article Discussion 1. Title of the Research Paper: Green synthesized clove- treated carbon nanotubes/titanium dioxide hybrid nanofluids for enhancing flat- plate solar collector performance 2. Name of the journal: Applied Thermal Engineering 3. Year of Publication: 2024 | 12:00 – 1:00 Article Discussion 1. Title of the Research Paper: Design and techno-economic analysis of an off-grid integrated PV-biogas system with a constant temperature digester for a cost- effective rural application 2. Name of the journal: Energy 3. Year of Publication: 2024 | 12:00 – 1:00 Article Summary Co-ordinated by Dr. L.Anojkumar, Associate Professor, Department of Mechanical Engineering, Jansons Institute of Technology Coimbatore. |



END DATE: 19.07.2025

| 14.07.2025 | 15.07.2025 | 16.07.2025 | 17.07.2025 | 18.07.2025 | 19.07.2025 | | | | |
|---|---|---|--|--|---|--|--|--|--|
| 1:00 – 2:00 Lunch | 1:00 – 2:00 Lunch | 1:00 – 2:00 Lunch | 1:00 – 2:00 Lunch | 1:00 - 2:00 Lunch | 1:00 – 2:00 Lunch | | | | |
| 2:00 – 4:30 Session 2 Dr. G.SARAVANA ILANGO. Professor. Department of Electrical and Electronics Engineering National Institute of Technology Tiruchirappalli 20 Years of Experience in Research, Innovation and Product Development. "Cost Effective Solar PV system and Controller design for Industrial and Rural Applications". | 02:00 – 6:00 Industrial visit TBI @ KEC, Kongu Engineering College Campus, Perundurai – 638 060, Erode, TamilNadu. Incubation Unit Supported by DST, NSTEDB, NIDHI PRIYAS & MSME DEVELOPMENT CENTRES Energy Embedded Systems Digital Signal Processing Electronic Card Design, Assembly, Testing and Repair Wireless Embedded Systems Multimedia | 2:00 – 4:30 Session 5 Dr. K. K. Ajith Kumar, M.E., Ph.D (IIT), PDF. Designation & Organization: CEO, MatRICS-(Materials Research and Innovation Centric Solutions), Kanyakumari District, Tamilnadu, India. 15 Years of Experience in Research,Innovation and Product Development. "Magnesium alloy casting, Alloy development and Light alloy composites making for Energy" | 2:00 – 4:30 Session 7 Mr. VISHAL NAIR Wadhwani Foundation · Bengaluru, Karnataka 15 Years of Experience in Entrepreneurship Education Attaining Market-Product Fit: Prototype Designing Process and Tools for Development of Minimum Viable Product (MVP) in Energy Sector | 2:00 - 4:30 Session 9 Dr.V.P.CHANDRAMOHAN Professor Department of Mechanical Engineering National Institute of Technology, Warangal - 506004, Telangana. 21 Years of Experience in Teaching and Research "Research Methodology: How to write research articles to the reputed journal with the reference of Thermal Management of Green Data Centers and Design and Development of a Solar Updraft Power Plant | 2:00 – 4:00 MCQ & Reflection Journal Co-ordinated by Dr. L.Anojkumar, Associate Professor, Department of Mechanical Engineering, Jansons Institute of Technology, Coimbatore. | | | | |
| 4:30 – 5:30 Hands on training Performance Analysis of Solar Air Heater at Research and Product Development Lab | | 4:30 – 5:30 Hands on training /Labs Development of Scilab/Matlab Codes for Analysis of Solar system | 4:30 – 5:30 Hands-on training Preparation of Problem Statement and Value Proposition Canva | 4:30 - 5:30 Hands on training Preparation of Business Model Canva | 4:00 – 5:00 Valedictory Session | | | | |

Letter Head







AICTE – Sponsored SIX DAYS FACULTY DEVELOPMENT PROGRAM

Subject: NOC for Attending ATAL FDP

Ref No. 1743140094

Date:

To Whomsoever It May Concern

This letter is to express No Objection on Mr/Mrs/Ms/Dr.______in attending the FDP Program in the title "Energy Efficiency and Sustainable Practices: Advancing Green Technologies with Solar Thermal Systems" conducted at Jansons Institute of Technology, Coimbatore from 14th July 2025 to 19th July 2025.

This certificate is issued as per requirement of AICTE for successful conduction of ATAL Faculty Development Program.

Yours Sincerely,

(Sign & Stamp) HoI/Competent Authority Institute Name and Address