



**AICTE TRAINING AND LEARNING (ATAL)  
ACADEMY  
FACULTY DEVELOPMENT PROGRAMME (FDP)  
ON**

***"THE SYNERGY OF SUSTAINABLE  
MANUFACTURING AND INDUSTRY 4.0 TOWARDS  
SUSTAINABLE DEVELOPMENT"***

**FROM  
18TH – 23RD DECEMBER 2023**

**ORGANIZED BY**

**DEPARTMENT OF INDUSTRIAL & PRODUCTION  
ENGINEERING  
SCHOOL OF STUDIES IN ENGINEERING &  
TECHNOLOGY, GURU GHASIDAS VISHWAVIDYALAYA  
(A CENTRAL UNIVERSITY), BILASPUR, CHHATTISGARH  
495009**

Website : [www.new.ggu.ac.in](http://www.new.ggu.ac.in)

**CHIEF PATRON**



**PROF. ALOK KUMAR CHAKRAWAL**  
HONORABLE VICE CHANCELLOR,  
GGV BILASPUR

**PATRON**



**PROF. MANISH SRIVASTAVA**  
REGISTRAR, GGV, BILASPUR

**COORDINATOR**



**PROF. SHARAD CHANDRA SRIVASTAVA**  
DEAN & HEAD  
DEPARTMENT OF IP ENGINEERING  
SOS (E&T), GGV, BILASPUR

**CO-COORDINATOR**



**DR. GANESH PRASAD SHUKLA**  
ASSISTANT PROFESSOR  
DEPARTMENT OF IP ENGINEERING  
SOS (E&T), GGV, BILASPUR



**Registration Process**

✓ Registration has to be done only through <https://atalacademy.aicte-india.org/>

✓ last date of registration is 05th December 2023

✓ There is no Registration fee



**ABOUT GGV BILASPUR**

Guru Ghasidas Vishwavidyalaya is a Central University of India, located in Bilaspur C.G. State, established under Central Universities Act 2009, No. 25 of 2009. Formerly called Guru Ghasidas University (GGU), established by an Act of the State Legislative Assembly, was formally inaugurated on June 16, 1983.

GGV is approved by AICTE and is an active member of the Association of Indian Universities and Association of Commonwealth Universities. Situated in a socially and economically challenged area, the university is appropriately named to honour the great Satnami Saint Guru Ghasidas (born in the 17th century), who championed the cause of the downtrodden and waged a relentless struggle against all forms of social evils and injustice prevailing in the society. The University is a residential cum affiliating institution, having its jurisdiction spread over Bilaspur Revenue Division of the state of Chhattisgarh.





## ABOUT THE FDP

Amid pressing global challenges like climate change and resource depletion, industries worldwide seek sustainable development. The merging of sustainable manufacturing and Industry 4.0 presents a promising pathway. Sustainable manufacturing optimizes processes for eco-social well-being throughout the product lifecycle. Meanwhile, Industry 4.0's digitization and automation offer new levels of productivity and flexibility. This FDP examines their symbiotic relationship, transformative potential, and collaborative strategies for sustainable development. Embracing these paradigms can lead to a thriving and resilient global economy, shaping a greener future that safeguards natural resources while meeting the needs of the present and future generations.



## OBJECTIVES OF FDP

This course aims to provide participants with a comprehensive understanding of sustainable manufacturing, covering principles, eco-friendly materials, energy-efficient processes, and waste reduction techniques. It also explores Industry 4.0 technologies like IoT, Big Data, AI, and smart automation and their potential in driving sustainability. The course identifies intersections between sustainable practices and Industry 4.0, aiming to improve resource efficiency and environmental impact. Participants will learn to integrate sustainability into existing manufacturing processes, guided by Industry 4.0 technologies. The course also covers policy frameworks, encourages collaboration, helps develop action plans for implementation, emphasizes monitoring and assessment, and empowers participants to advocate sustainable development.



## CONTENT OF THE FDP



### THE COURSE CONTENT INCLUDES:

- Methodology For Developing Sustainable System
- Sustainable Supply Chains
  - Reverse Logistics Design
  - Challenges And Barriers In Industry 4.0
- Innovation And Design Thinking
- AI Applications In Manufacturing System
  - Industry 4.0 In Supply Chains
  - Sustainable Supply Chains
- Disruptive Technologies For Customized Manufacturing
- Industry 5.0 With Technology Commercialization
  - Renewable And Distributed Energy Systems
  - Project Planning And Sustainable Management



## WHO CAN PARTICIPATE

This FDP is on contemporary issues and Interdisciplinary, thus it provides an opportunity to faculty members such as Associate Professors, Assistant Professors, PhD Scholars, M. Tech/PG Students of various disciplines of Engineering and Technology

## SELECTION AND CERTIFICATION CRITERIA

Selection will be done based on first-cum first-serve basis and the confirmed candidate will be notified on receipt of registration form latest by 05 December 2023.

The certificates shall be issued to those participants who are registered on ATAL portal [www.aicte-india.org/atal](http://www.aicte-india.org/atal) and attend the program with minimum 80% attendance and marking will be done as per the ATAL guidelines

## ACCOMMODATION

Selected Participants will be provided accommodation in the Institute's Guest House on Self-Payment Basis

## ADVISORY COMMITTEE MEMBERS

- Prof. Mukesh Kumar Singh  
(Professor- Department of Industrial and Production Engineering)
- Mr. C.P. Dewangan  
(Associate Professor, Department of Industrial and Production Engineering)

## PROGRAM DATES



18th to 23rd December, 2023



Department of IP Engineering,  
Guru Ghasidas Vishwavidyalaya  
(A Central University), Bilaspur,  
Chhattisgarh



OFFLINE

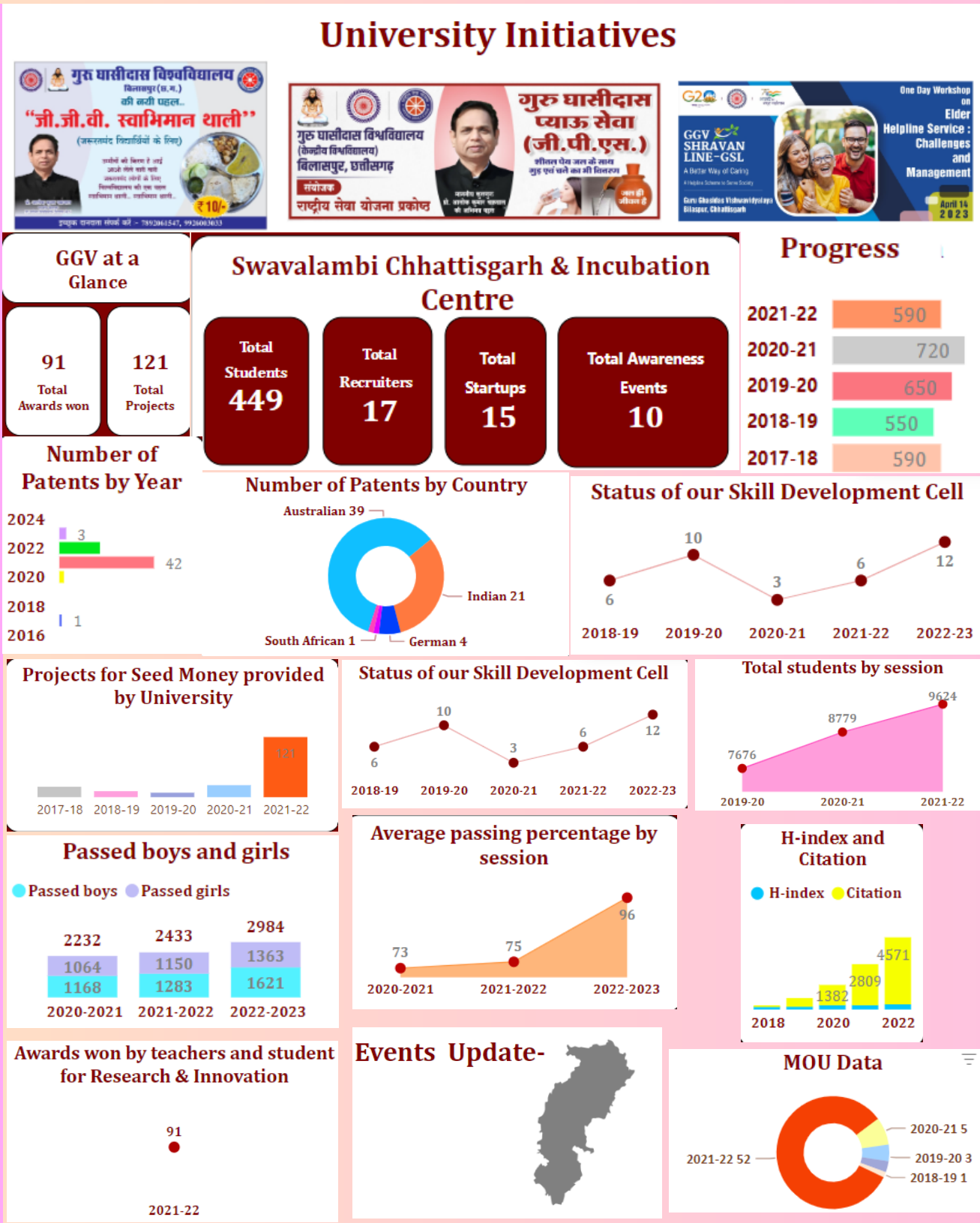
## ORAGNIZING COMMITTEE MEMBERS

- Mrs. Arpita Roychaudhary (Assistant Professor, Department of Industrial and Production Engineering)
- Dr. Nitin Kumar Sahu (Assistant Professor, Department of Industrial and Production Engineering)
- Mr. Anuraj Singh (Assistant Professor, Department of Industrial and Production Engineering)
- Mr. Somnath Singroual (Assistant Professor, Department of Industrial and Production Engineering)
- Dr. Anu Lal Mahto (Workshop Superintendence)
- Mrs. Disha Dewangan (Assistant Professor, Department of Industrial and Production Engineering)
- Mr. Kailash Borkar (Assistant Professor, Department of Industrial and Production Engineering)
- Dr. Atul Kumar Sahu (Assistant Professor, Department of Industrial and Production Engineering)
- Mr. Kawal Lal Kurrery (Assistant Professor, Department of Industrial and Production Engineering)
- Mr. Pranav Gupte (PhD Scholar, Department of Industrial and Production Engineering)
- Mr. Sanju Kumar Nishand (PhD Scholar, Department of Industrial and Production Engineering)



# ABOUT IPE DEPARTMENT

Department of Industrial & production Engineering was established in the year 1997 . Department has well qualified faculty & trained staff . Department has well equipped laboratories for students. The industry training for the students of final year & third year students are arranged to impart practical exposure in the organization like SECL ,BHEL, BALCO, JINDAL , CSEB power plants and in other public and private company.Department is also engaged in organizing other activities like seminars , guest lectures, aptitude test , quiz to provide and develop inter personal skills . Every year approximately ten students qualify the national level GATE exam . The passed out students are working in company like RELIANCE ENERGY LTD.,BALCO, JINDAL , CSEB , DRDO, ISRO, HAL, and Indian Railways.



## ADDRESS FOR CORRESPONDENCE

Department of IP Engineering  
School of Studies, Engineering & Technology  
Guru Ghasidas Vishwavidyalaya  
(A Central University)  
Bilaspur, Chhattisgarh. Pin-495009

## CONTACT DETAILS

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# Departments of Industrial and Production Engineering

Guru Ghasidas Vishwavidyalaya (A Central University),  
Bilaspur, C.G., India



**AICTE Training and Learning (ATAL) Academy**  
**Sponsored**  
**One Week Offline Faculty Development Program (FDP)**

**"THE SYNERGY OF SUSTAINABLE MANUFACTURING  
AND  
INDUSTRY 4.0 TOWARDS SUSTAINABLE DEVELOPMENT"**

## EMINENT SPEAKERS



Prof. Alok Kumar Chakrawal  
(Vice-Chancellor, GGV)



Prof. Gajendra Kumar Adil  
(IIT, Bombay)



Prof. Sandeep Mondal  
(IIT (ISM), Dhanbad)



Mr. D. P. Singh  
(Head, Environment Climate Change and  
Sustainability, JSPL, Raigarh)



Prof. Manish Gupta  
(MNNIT, Allahabad)



Prof. Vikas Thakur  
(IIT, Kharagpur)



Prof. Om Ji Shukla  
(NIT, Patna)



Mr. Alok Kumar Tripathi  
(GM, NTPC)



Prof. Suraj Kumar Mukti  
(NIT, Raipur)



Prof. Shubham Tripathi  
(NIT, Jamshedpur)





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**FROM**  
**18TH – 23RD DECEMBER 2023**

## Course Schedule

	Date	9:30-12:00	12:00-1:00	1:00-2:00	2:00-4:30	4:30-5:30	
DAY 1	18th Dec 2023 (Monday)	Prof. Alok Kumar Chakrawal (Vice-Chancellor, GGV) (National Education Policy NEP 2020: Implementation, Benefits & Challenges)	Article Discussion	Lunch Break	Prof. Vikas Thakur (IIT, Kharagpur) (Sustainable supply chains equipped with Industry 4.0)	[Hands-On Session] (Life Cycle Analysis) Coordinator	
DAY 2	19th Dec 2023 (Tuesday)	Prof. Suraj Kumar Mukti (NIT, Raipur) (Industry 5.0 with Technology Commercialization)	Article Discussion		Prof. Sandeep Mondal (IIT (ISM), Dhanbad) (Reverse Logistics Design for Remanufacturing)	[Hands-On Session] (Disruptive Technologies for Customized manufacturing) Co-Coordinator	
DAY 3	20th Dec 2023 (Wednesday)	Prof. Shubham Tripathi (NIT, Jamshedpur) (Role of Industry 4.0 paradigm in Supply chain sustainability development)	Article Discussion		Prof. Om Ji Shukla (NIT, Patna) (AI applications in Manufacturing system)	[Hands-On Session] (Renewable and Distributed Energy Systems with EV Integration) Coordinator	
DAY 4	21st Dec 2023 (Thursday)	Prof. Manish Gupta (MNNIT, Allahabad) (Maturity Models in Industry 4.0 / readiness assessment 4.0 / challenges and barriers in Industry 4.0)	Article Discussion		Mr. D. P. Singh (Head, Environment Climate Change and Sustainability, JSPL, Raigarh) (Environment, Climate Change and Sustainability, challenges and way forward)	[Hands-On Session] (Project Planning and Sustainable Management in reference to Industry 4.0) Co-Coordinator	
DAY 5	22nd Dec 2023 (Friday)	Industrial visit			Mr. Alok Kumar Tripathi (GM, NTPC) (Innovation and Design Thinking)		
DAY 6	23rd Dec 2023 (Saturday)	Prof. Gajendra Kumar Adil (IIT, Bombay) (Sustainable Manufacturing Strategies)	Reflection Journal		MCQs, Feedback, Interactions	Valedictory Session	



## ATAL-FDP 2023-24: LIST OF REGISTERED PARTICIPANTS

<b>NAME</b>	<b>Institute Name</b>
Mr. ANURAG SINGH	Guru Ghasidas Vishwavidyalaya Bilaspur
Dr. T G Loganathan	RMK College of Engineering and Technology
Dr. Anulal Mahto	Guru Ghasidas Vishwavidyalaya Bilaspur
Mr. KAWAL LAL KURREY	Guru Ghasidas Vishwavidyalaya Bilaspur
Mr. Swapnil Shukla	Kalinga University
Mr. Shrey Anant Sandiman	Guru Ghasidas Vishwavidyalaya Bilaspur
Mr. Kailash Kumar Borkar	Guru Ghasidas Vishwavidyalaya Bilaspur
Mr. SOMNATH SINGROUL	Guru Ghasidas Vishwavidyalaya Bilaspur
Mr. DILESHWAR KUMAR SAHU	BHILAI INSTITUTE OF TECHNOLOGY RAIPUR
Mr. Gembali Vidyasagar	Indian Institute of Management Visakhapatnam
Dr. Saurav suman	National institute of technology Mizoram
Mr. PRASHANT KUMAR JANGDE	Guru Ghasidas Vishwavidyalaya Bilaspur
Mr. Nitin Kumar Sahu	Guru Ghasidas Vishwavidyalaya Bilaspur
Dr. Atul Kumar Sahu	Guru Ghasidas Vishwavidyalaya Bilaspur
Mr. Sumit Kumar Gupta	Guru Ghasidas Vishwavidyalaya Bilaspur
Mr. CHHATRAPAL DEWANGAN	Guru Ghasidas Vishwavidyalaya Bilaspur
Mrs. Arpita Roychoudhury	Guru Ghasidas Vishwavidyalaya Bilaspur
Mrs. DISHA DEWANGAN	Guru Ghasidas Vishwavidyalaya Bilaspur
Dr. Pradeep Kumar Karsh	Parul University
Dr. RITYUJ SINGH PARIHAR	Shri Shankaracharya Institute Of Professional Management And Technology
Mr. Anand kumar shriwas	Chouksey engineering college
Mr. Chandan Tamrakar	Guru Ghasidas Vishwavidyalaya Bilaspur
Mr. SANJU KUMAR NISHAD	Guru Ghasidas Vishwavidyalaya Bilaspur
Mr. Pranav Gupte	Guru Ghasidas Vishwavidyalaya Bilaspur
Mr. Vidyanand Kumar	National Institute of Technology Patna
Mr. Prasoon Kumar	NIT Patna
Mr. Vaibhav Kant Singh	Guru Ghasidas Vishwavidyalaya Bilaspur
Mr. Shyam Singh Kanwar	GEC Bilaspur CG
Mrs. poonam diwan	Vec lakhanpur
Mr. kailash Kumar Mishra	REC BANDA
Mr. Divyajyoti Biswal	Visvesvaraya National Institute of Technology, Nagpur
Mr. GANESH RAM	GOVERNMENT POLYTECHNIC BALODABAZAR (CHHATTISGARH)



Mr. PIYUSH TIWARI	JS GEC JAGDALPUR
Mr. Satish Upadhyay	JSGEC JDP
Mr. Dhananjay	IoM, Pt. RSSU Raipur CG
Mr. Ajay Singh Paikra	Jhada Sirha Govt. Engineering College, Jagdalpur
Mr. Dushyant Kumar Dewangan	Government Polytechnic Gariyaband
Mr. Nirvikar Gautam	Vishwavidyalaya Engineering College Ambikapur
Mrs. Bharti Sharma	Vishwavidyalaya engineering college ambikapur
Mr. ABHISHEK KUMAR VERMA	JSGEC JAGDALPUR
Mr. KAMLESH RATRE	CSV TU BHILAI DURG
YUGENDRA KUMAR SAHU	Guru Ghasidas Vishwavidyalaya Bilaspur
Mahesh Kamalakar Bhiwapurkar	O P Jindal University Raigarh
Shubhra Vishwas	Guru Ghasidas Vishwavidyalaya Bilaspur
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Saurabh Tripathi	REC Banda
Abhishek Mishra	IERT Prayagraj
Debajyoti Som	KANAD INSTITUTE OF ENGG AND MGMT
Ravi Kumar	NIT Patna
Ayush Kumar Agrawal	NIT Jamshedpur
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Ashutosh Sharma	GGV, Bilaspur
Manjit Jaiswal	GGV, Bilaspur
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Vinod Kumar	GGV, Bilaspur
Pushpendra Kumar Chandra	GGV, Bilaspur
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Vijay Kumar Shukla	VEC, Ambikapur
Leeladhar Rajput	IIT, Kharagpur
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Nishant Prakash	GGV, Bilaspur
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