

ADVISORY COMMITTEE

Dr. Alok Kumar Sahu
(Principal Director & Head)

ORGANIZING COMMITTEE

Mr. Rajiv Kumar Lilhare (Manager (Technical))
Mr. Jitendra Kumar Mahaseth (Officer-F&A)

TECHNICAL COMMITTEE

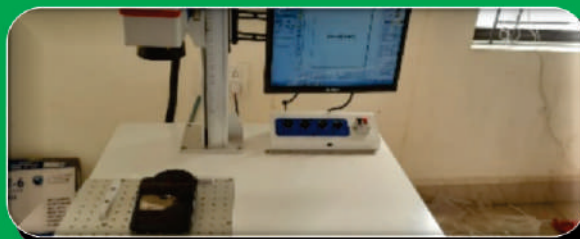
Mr. Hrushikesh Bhanja (Lecturer-PE)
Mr. Rajnish Prasad Pandey (Lecturer-EEE)
Mr. Ranjan Kumar (Lecturer- ME)
Mr. Jagamohan Behra (Technician Gr-I)
Mr. Mahesh Tudu (Tech. Asst. Gr-III)

ABOUT CIPET, KORBA

Central Institute of Petrochemicals Engineering & Technology (CIPET) (formerly known as Central Institute of Plastics Engineering & Technology (CIPET)) was established in 1968 by Government of India with the assistance of United Nations Development Programme (UNDP) at Chennai. The main objective of setting up of this specialized institute was to develop manpower in different disciplines of Plastics Engineering & Technology as no similar institute was in existence in the country. Today CIPET is a premier Academic institution for higher & technical education under the Ministry of Chemicals & Fertilizers, Govt. of India fully devoted in all the domains of plastics viz:- Design, CAD/CAM/CAE, Tooling & Mould Manufacturing, Production Engineering, Testing and Quality Assurance CIPET operates on hub & spokes model with 51 locations - 9 (IPT), 32 (CSTS), 3 (SARP), 4 (Sub-Centre), 3 (PWMC). A unit of CIPET has been established in the city of Korba situated at Power City of Chhattisgarh. It provides academic and employment oriented skill development training and technical support service to plastics and allied industries.

OBJECTIVE OF TRAINING

This FDP aims to enhance the knowledge of customised manufacturing through various advanced machining processes. The FDP will give exposure to the participants about applications of Customized manufacturing in latest trends in industrial fields. The programme shall also enable the participants to understand and practice the use of CO2 laser Cutting Machine, Laser Engraving machine and 5 axis machining. The speakers will also highlight the research being carried out in these areas and to make the participants familiar with the latest CAD-CAM tools. This programme will include lectures delivered by the eminent experts (NIT's, IIT's, IIITDM and Universities) and researchers with the practical lab session. The sessions will also explore the new avenues and problems associated in the new product development. The industry 4.0 will also contribute in the modern collaboration and developments in Hybrid manufacturing research.



AICTE TRAINING AND LEARNING (ATAL) Academy



Faculty Development Programme on “Customised Product Manufacturing on Advanced CNC Machines”

(January 13-18, 2025)

Organized by



Department of Plastics Engineering Central Institute of Petrochemicals Engineering and Technology (CIPET)

CIPET Education Hub, Syahimudi,
Post: Gopalpur, Via-Jamnipali,
Korba.



Phone No.: +91-7759-222570

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E-mail: korba@cipet.gov.in

ELIGIBILITY

This FDP is interdisciplinary in nature. The target audience will be Faculty members of the AICTE approved institutions/Assistant Professors /Associate Professor/Ph.D. Scholars/PG students & Industry professionals. It is meant for beginners, as well as a refresher course for those already involved in the process of new product development and research.

REGISTRATION FEES

There is no registration charge. Maximum 50 (minimum 30) participants may be allowed from the Higher Education Institutions from the Korba district or within 100 km of the host institute. The applicant is requested to get themselves registered through the following link and steps to be followed: <https://atalacademy.aicte-india.org/signup>

- 1) Please login and update the personnel details.
- 2) Then go to Workshop (Left Side).
- 3) Select " Chhattisgarh" in State, "January" as Month, "Digital Manufacturing Technology ", Thrust Area.
- 4) Click on "+" to apply for this FDP and then click on "OK".

Participants should be nominated by the respective Heads of Institutions

ATTENDANCE AND CERTIFICATION

The certificate shall be issued to those participants who will achieve/achieving at least 70% cumulated weightage in the following aspects in the weightage mentioned (Attendance, One assessment, 2 Page Article Summary/per Team, Output of practical sessions, Report/outcome of Industrial visit and Reflection Journal.

COURSE CONTENT

1. Susceptibility study of some microstrip filters.
2. **Hydraulic/Pneumatics Controls for Customization in CNC Operations**
3. Laser based Vs. Non laser based 3 D printing: green circular economy perspective.
4. Approach to Industry 4.0: cloud based product design and development.
5. Issues in Metal Additive Manufacturing using Laser Cladding Process.
6. Computational Intelligence for Advanced CNC Machining.
7. Modelling & Optimisation of Micro machining.
8. Post processing techniques in additive manufacturing.
9. Importance of Yoga & Meditation for Health.
10. Advances in Modern machining.
11. Hands on Session on advanced machine.

COORDINATOR

Dr. Diwesh Meshram

Head of The Department/ Technical Officer

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E-mail: diweshm@cipet.gov.in

KEY SPEAKERS

- ★ **Dr. Lakhindar Murmu**, Assistant Professor, Dr. SPM, IIIT-Naya Raipur
- ★ **Dr. R. Joseph Bensingh**, Principal Scientist, CIPET: SARP - APDDRL - Bengaluru.
- ★ **Dr. Mahesh K Bhiwapukar**, Professor & Head OPJU, Raigarh
- ★ **Dr. Dineshsingh G.Thakur**, Professor, DIAT, Pune.
- ★ **Dr. T.V.K Gupta**, Associate Professor, VNIT, Nagpur.
- ★ **Dr. Prashant K.Jain**, Professor, IIITDM, Jabalpur.

- ★ **Dr. M.K. Pradhan**, Associate Professor, NIT, Raipur.
- ★ **Dr. Soumya Gangopadhyay**, Associate Professor, IIT, Bhilai.
- ★ **Mr. S. K. Rajeev Nair**, Corporate Relation Manager, CSIT, Durg.
- ★ **Dr. Vikas Gohil**, Associate Professor, BIT, Wardha
- ★ **Mr. Tilesh Sahu**, Devanshy Engineering, Bhilai.
- ★ **Mr. Prasad Auti**, Hass Manufacturing, Mumbai.

ABOUT DEPARTMENT

The Department of Plastics Engineering came in existence since 2019. The department will be playing a vital role to create skilled and technically trained manpower in the field of Plastics Technology by Long Term Courses i.e Diploma in Plastics Technology (DPT) and Diploma in Plastics Mould Technology (DPMT). Our diploma programs combine hands-on laboratory experience along with a strong emphasis on mathematics, science and engineering theory. The students have practical exposure in the domain of plastics/ Petrochemical Engineering. The placement has provided to all the enrolled students for both the courses. This department had various latest machines equipped with modern infrastructure for continual growth of the students and faculties.



FDP Application Number : 1716528999

Title of the FDP: Customised Product Manufacturing on Advanced CNC Machines

FDP Start Date : 13.01.2025

FDP End Date: 18.01.2025

Day 1 (13.01.2025)	Day 2 (14.01.2025)	Day 3 (15.01.2025)	Day 4 (16.01.2025)	Day 5 (17.01.2025)	Day 6 (18.01.2025)
<p>9:00 – 9:30 Inauguration</p>					
<p>9:30 – 12:00 Session 1</p> <ol style="list-style-type: none"> Name of the Expert : <i>Dr. Lakhindar Marmu.</i> Designation : <i>Assistant Professor.</i> Organization: <i>IIT-Naya Raipur</i> Experience in Years: <i>12.</i> Topic to be taught: <i>Susceptibility study of some microstrip filters</i> 	<p>9:30 – 12:00 Session 3</p> <ol style="list-style-type: none"> Name of the Expert : <i>Dr. Vikas Gohil</i> Designation : <i>Associate Professor.</i> Organization: <i>BIT, Wardha.</i> Experience in Years: <i>15.</i> Topic to be taught: <i>Advances in Modern machining</i> 	<p>9:30 – 12:00 Session 5</p> <ol style="list-style-type: none"> Name of the Expert : <i>Dr. Dinesh Singh G. Thakur</i> Designation : <i>Professor.</i> Organization: <i>DIAT, Pune.</i> Experience in Years: <i>26.</i> Topic to be taught: <i>Approach to Industry 4.0: cloud based product design and development.</i> 	<p>9:30 – 12:00 Session 7</p> <ol style="list-style-type: none"> Name of the Expert : <i>Dr. M.K. Pradhan.</i> Designation : <i>Associate Professor.</i> Organization: <i>NIT, Raipur.</i> Experience in Years: <i>24.</i> Topic to be taught: <i>Modelling & Optimisation of Micro machining.</i> 	<p>9:00 – 1:00 Industrial visit</p> <ol style="list-style-type: none"> Name of the Organization: <i>National Thermal Power Corporation</i> Complete address with pincode : <i>Jamnipali, Korba 495450</i> Industry Type: <i>Power Plant</i> Area of specification : <i>Machine Design/Thermal Engineering</i> 	<p>9:30 – 12:00 Session 10</p> <ol style="list-style-type: none"> Name of the Expert : <i>Shri S.K. Rajeev Nair</i> Designation : <i>DEAN (CA, PR, SC)</i> Organization: <i>CSIT, Durg.</i> Experience in Years: <i>23.</i> Topic to be taught: <i>Importance of Yoga & Meditation for Health.</i> 
<p>12:00 – 1:00 Article Discussion</p> <ol style="list-style-type: none"> Title of the Research Paper : <i>Parametric and heat affected zone study on CO2 laser cutting of Acrylic</i> Name of the journal: <i>MethodsX</i> Year of Publication: <i>2023</i> 	<p>12:00 – 1:00 Article Discussion</p> <ol style="list-style-type: none"> Title of the Research Paper : <i>Static structural analysis of great five-axis turning-milling complex CNC machine</i> Name of the journal: <i>Engineering Science and Technology, an International Journal</i> Year of Publication: <i>2016</i> 	<p>12:00 – 1:00 Article Discussion</p> <ol style="list-style-type: none"> Title of the Research Paper : <i>Parametric and heat affected zone study on CO2 laser cutting of Acrylic</i> Name of the journal: <i>MethodsX</i> Year of Publication: <i>2023</i> 	<p>12:00 – 1:00 Article Discussion</p> <ol style="list-style-type: none"> Title of the Research Paper : <i>Static structural analysis of great five-axis turning-milling complex CNC machine</i> Name of the journal: <i>Engineering Science and Technology, an International Journal</i> Year of Publication: <i>2016</i> 		<p>12:00 – 1:00 Article Summary</p>
<p>1:00 – 2:00 Lunch</p>	<p>1:00 – 2:00 Lunch</p>	<p>1:00 – 2:00 Lunch</p>	<p>1:00 – 2:00 Lunch</p>	<p>1:00 – 2:00 Lunch</p>	<p>1:00 – 2:00 Lunch</p>
<p>2:00 – 4:30 Session 2</p> <ol style="list-style-type: none"> Name of the Expert : <i>Dr. Mahesh K Bhiwapurkar</i> Designation : <i>Professor & Head</i> Organization: <i>O.P. Jindal University Raigarh</i> Experience in Years: <i>25</i> Topic to be taught: <i>Hydraulic/Pneumatics Controls for Customization in CNC Operations</i> 	<p>2:00 – 4:30 Session 4</p> <ol style="list-style-type: none"> Name of the Expert : <i>Dr. R. Joseph Bensingh.</i> Designation : <i>Sr. Scientist & Head.</i> Organization: <i>CIPET- SARP- APDDRL - Bengaluru.</i> Experience in Years: <i>29.</i> Topic to be taught: <i>Design for manufacturing in customised Product</i> 	<p>2:00 – 4:30 Session 6</p> <ol style="list-style-type: none"> Name of the Expert : <i>Dr. Prashant K. Jain.</i> Designation : <i>Professor.</i> Organization: <i>IITDM, Jabalpur.</i> Experience in Years: <i>25.</i> Topic to be taught: <i>Computational Intelligence for Advanced CNC Machining</i> 	<p>2:00 – 4:30 Session 8</p> <ol style="list-style-type: none"> Name of the Expert : <i>Dr. Soumya Gangopadhyay</i> Designation : <i>Associate Professor.</i> Organization: <i>IIT, Bhilai.</i> Experience in Years: <i>15</i> Topic to be taught: <i>Post processing techniques in additive manufacturing</i> 	<p>2:00 – 4:30 Session 9</p> <ol style="list-style-type: none"> Name of the Expert : <i>Dr. T.V.K Gupta</i> Designation : <i>Associate Professor.</i> Organization: <i>VNIT, Nagpur.</i> Experience in Years: <i>17.</i> Topic to be taught: <i>Issues in Metal Additive Manufacturing using Laser Cladding Process.</i> 	<p>2:00 – 4:00 MCQ & Reflection Journal</p>
<p>4:30 – 5:30 Hands on training on CO2 Laser Cutting Machine</p>	<p>4:30 – 5:30 Hands on training on 3D Printing machine</p>	<p>4:30 – 5:30 Hands on training on Laser Engraving machine</p>	<p>4:30 – 5:30 Hands on training on 5-axis machine</p>	<p>4:30 – 5:30 Hands on training on CAD CAM Softwares</p>	<p>4:00 – 5:00 Valedictory Session</p>