



JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY
WAKNAGHAT, P.O. – WAKNAGHAT,
TEHSIL – KANDAGHAT, DISTRICT – SOLAN (H.P.)
PIN – 173234 (INDIA) Phone Number- +91-1792-257999
(Established by H.P. State Legislature vide Act No. 14 of 2002)



Exploring Sustainable Energy Solutions: A Hands-On Learning Experience

4 April 2025



Exploring Sustainable Energy Solutions- A Hands-On Learning Experience

An

special interactive session for the students of the
College of Horticulture and Forestry, Neri, Hamirpur
(Himachal Pradesh)



 4 April 2025

 Department of Civil Engineering, JUIT

Resource Person
Prof. Ashish Kumar
Head, Civil Engineering
Department, JUIT

Topic
Biogas production
from food waste using
a portable one-stage
digester system.

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 www.juit.ac.in/TIEDC_IICs

On April 4th, 2025, students from the College of Horticulture and Forestry, Neri, Hamirpur (Himachal Pradesh), visited the Department of Civil Engineering at Jaypee University of Information Technology (JUIT), Wagnaghat, for an interactive and educational session focused on sustainable energy generation. The visit was part of their 6 week training program in Biotechnology & Bioinformatics department of university to familiarize the students about renewable energy technologies, and rural empowerment through hands-on exposure to real-world solutions. The students of UG PG and Phd also attended the session.



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The session was taken by **Prof. Dr. Ashish Kumar**, Head of the Civil Engineering Department, who introduced the students to an innovative project involving **biogas production from food waste** using a **portable one-stage digester system**. This plant is installed within the department premises, features a **1000-litre anaerobic digester** and a **750-litre capacity gas holder**. It serves as a working model of how waste-to-energy technologies can be effectively deployed in rural and semi-urban settings.

The biogas plant uses **food waste**, converting it into usable methane gas through anaerobic digestion. The daily output is sufficient to fuel a pantry kitchen gas burner for **40–45 minutes**, primarily used for making tea for staff. This real-time demonstration offers a practical solution to rural cooking needs while minimizing dependence on LPG and firewood, thereby reducing environmental impact and household energy costs.

He emphasized the importance of such **sustainable solutions**, especially in **rural Himachal Pradesh**, where food waste management and clean energy access are pressing challenges. The portable digester system is low-cost, above the ground, easy to maintain, and scalable — making it highly suitable for **households, small institutions**. Not only does it address food waste disposal, but it also produces **organic slurry** as a by-product, which can be used as **nutrient-rich bio-fertilizer**, thus supporting integrated farming practices.

The session highlighted the dual benefits of this approach — **environmental sustainability** and **rural empowerment**. By adopting biogas technology, rural communities can reduce carbon emissions, improve sanitation, and become self-reliant in energy production.



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Social Media Link:

<https://www.linkedin.com/feed/update/urn:li:activity:7315231923818184704/>

List of participants :

Sr. No.	Name	Admission No
1	Ananya	NB-2021-01-BIV
2	Ankita Sain	NB-2021-02-BIV
3	Arpita	NB-2021-03-BIV



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4	Harsh Dhiman	NB-2021-04-BIV
5	Kirti Rana	NB-2021-05-BIV
6	Meenakshi Verma	NB-2021-06-BIV
7	Namita	NB-2021-07-BIV
8	Neelam	NB-2021-08-BIV
9	Prinkit Kumar Walia	NB-2021-09-BIV
10	Priyanka Singh	NB-2021-10-BIV
11	Ridhika	NB-2021-11-BIV
12	Sarika Sharma	NB-2021-12-BIV
13	Shagun Sharma	NB-2021-13-BIV
14	Shivanshi Sharma	NB-2021-14-BIV
15	Tanya	NB-2021-15-BIV
16	Vinayak Sharma	NB-2021-16-BIV
17	Vishakha	NB-2021-17-BIV
18	Vishakha Sharma	NB-2021-18-BIV
19	Akshika	245011001
20	Dhruv	245011002
21	Tushar	245011004
22	Akshita Dogra	245011005



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23	DEEPAK BANYAL	231011001
24	Aditya Sharma	23101002
25	RISHA VERMA	231011003
26	ANUSHKA MISHRA	231011004
27	ARYAN SHARMA	231011005
28	PRERAK CHOUHAN	231011006
29	MITALI GAUTAM	231011007
30	AMAN THAKUR	231011008
31	MANAN KASHTAIK	231011010
32	MANASVI CHAUHAN	231011011
33	ARPITA SINGH	231011012
34	SAKSHI KUMARI	231011013
35	Chinmayee	235112002
36	Pallavi	225112003
37	Manisha Thakur	246602
38	Kanan Thakur	246603
39	Amreen	246601
40	Richa Sharma	246604