



### JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY WAKNAGHAT, P.O. - WAKNAGHAT,

TEHSIL - KANDAGHAT, DISTRICT - SOLAN (H.P.) PIN - 173234 (INDIA) Phone Number- +91-1792-257999







**Exploring Sustainable Energy Solutions: A Hands-On Learning Experience** 

4 April 2025



On April 4<sup>th</sup>, 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), Waknaghat, 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 realworld solutions. The students of UG PG and Phd also attended the session.





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(Established by H.P. State Legislature vide Act No. 14 of 2002)







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.

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.

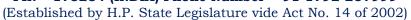
The session highlighted the dual benefits of this approach — **environmental sustainability** and **rural empowerment**. By adopting biogas technology, rural communities can reduce carbon emissions, improve sanitation, and become self-reliant in energy production.





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### List of participants:

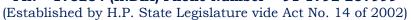
Sr. No.	Name	Admission No
1	Ananya	NB-2021-01-BIV
2	Ankita Sain	NB-2021-02-BIV
3	Arpita	NB-2021-03-BIV





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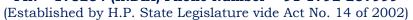
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4	Harsh Dhiman	NB-2021-04-BIV
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6	MeenakshiVerma	NB-2021-06-BIV
7	Namita	NB-2021-07-BIV
8	Neelam	NB-2021-08-BIV
9	Prinkit Kumar Walia	NB-2021-09-BIV
10	Priyanka Singh	NB-2021-10-BIV
11	Ridhika	NB-2021-11-BIV
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
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