



**VISHWAKARMA
UNIVERSITY**

Maximising Human Potential

University Grants Commission (UGC) Approved State Private University

CENTER OF EXCELLENCE FOR ENERGY AND SUSTAINABILITY IN COLLABORATION WITH



Integrated Environmental Solutions Pvt. Ltd (UK).



Qi Square Pte. Ltd. (Singapore)



What are Sustainable Development Goals?



All 17 Sustainable Development Goals are aimed at addressing the problems of society in view of satisfying the need for environmental conservation. Prioritizing the same objective of creating a sustainable environment for the users of the University campus, this unique ECOCAMPUS has been founded and the Centre of Excellence for Energy and Sustainability has been established.

Vision

To develop VU as a “global sustainability thought leader committed to improving the society by providing an empowering partnership for the development of technology and educating the future generation”

Mission

To holistically address the sustainability at Vishwakarma University by using the following:



Objectives

- To make the Vishwakarma University campus a “Living Laboratory” or “Testbed” for research and development of new technologies.
- To focus on the demonstration of projects which showcase state-of-the-art technologies and solutions addressing real-life problems.
- To assess the performance of various types of buildings by doing energy modeling and suggesting energy conservation measures.

Our Team



Dr. Kailas Patil
Director



Maya Kurulekar
Deputy Director



Pranav Dhaneshwar
Member



Abhay Chavan
Member

Activities

a. Avenues for collaboration

- MoU between VU and Integrated Environmental Solution (IES) on 19th March 2019. This is an Authorised Training Partnership agreement signed between both the beneficiaries for the future of energy conservation.
- MoU between VU and Qi Square Pte. Ltd. (Singapore) on 1st March 2021.

b. Training & Courses offered

- Training on different modules of IESVE, which can be used to create a 3D model of a building and simulate it for different weather conditions to know the present or future energy consumption.
- Training on data collection related to energy consumption data of various types of buildings, analyzing this data, and using it for finding baseload and energy conservation measures.
- An Energy Audit Elective is offered to students enrolled in the Mechanical Engineering and Architecture programmes.

SUMMARY OF ACTIVITIES CONDUCTED UNDER CoE

Date	Description
9th to 12th March 2021	at 7 am to 12 pm as per IST, conducted by the Singapore team
20th May to 24th May 2019	IES VE Training, Speaker: IES team
25th Feb to 3rd Mar 2019	Introduction to NanoTechnology, Speaker: Louis Hornyak, AIT, Thailand
13th February 2019	Design Thinking, Speaker: Prof. Michael Testani, BU, USA
24th August 2018	Green Career Opportunities Speaker: Nilesh Jadhav, NTU Singapore
23rd August 2018	Green Career Opportunities Speaker: Nilesh Jadhav, NTU Singapore
3rd July 2018	Virtual Auditing Software IES Training Trainer: IES Technical Head and Team
4th July 2018	Virtual Auditing Software IES Training Trainer: IES Technical Head and Team
9th June 2018	EcoCampus Workshop I Speaker: Nilesh Jadhav, NTU Singapore

a. Internships Offered and Completed

Sr. No.	Year	Number of Students	Host Organization	Status of Internship	Name of Students
01	September 2018 - December 2018	03	IES	Completed	1. Atharva Joshi 2. Niyati Khandelwal 3. Yash Suryawanshi
02	August 2019 - December 2019	05	IES	Completed	1. Nishank Prabhune 2. Samarth Patil 3. Rohan Malji 4. Shubham Shelke 5. Pratik Swami
03	August 2020 - March 2021	07	Qi Square	Completed	1. Pratik Hawal 2. Shubham Sakhare 3. Bhushan Shete 4. Shubham Kulkarni 5. Jai Vaswani 6. Abhinav Patil 7. Somil Manke
04	Sep 2020 - June 2021	03	IES	Completed	1. Karan Jagtiani 2. Rajat Choudhary 3. Sarosh Dandoti
05	Feb 2021 - August 2021	06	Qi Square	Completed	1. Pratham Vernekar 2. Aqueel Kadri 3. Aman Bargir 4. Alok Yadav 5. Poonam Kumbhar 6. Suyash Sabnis
06	Jan 2021 - June 2021	04	Energy & Sustainability CoE at VU	Completed	1. Akash Mundada 2. Akash Samtani 3. Manan Shah 4. Atharva Joshi
07	July 2021 - Dec 2021	01	IES	In progress	1. Niharika Devkhile
08	August 2020 - November 2020	04	IUCEE team of Global Experts	Completed	1. Vidhita Dadarkar 2. Omkar Bhujbal 3. Malay Khakhar 4. Neel Ranka

Research & Development

a. Current research areas

1. Energy audit of buildings in a virtual environment
2. Energy conservation measures in the buildings
3. IoT based energy use calculation and analysis

b. Student projects & Publications

Sr. No.	Project Title	Industry/ Institute Name	Nature of Collaboration	No. of Students/ Faculties involved
01	Virtual Energy audit of Academic, Industrial and Commercial building - Project work converted to a paper and presented at an International conference at Phuket 2018, published in IEEE XPLORE	Energy & Sustainability CoE at VU	Student Project/ research project	5/4 3 - Computer 2 - Mechanical
02	Virtual Energy audit of Residential Bungalow - Project work converted to a paper and presented at an International conference at Thailand 2020, published in IEEE XPLORE			3/1 3 - Computer
03	Energy conservation of industrial building, Faurecia Automotive Seating Pvt. Ltd - This Project work is in progress of conversion into research paper.			5/2 4 - Computer 1 - Mechanical
04	Energy consumption analysis using Digital Twin Technology - Paper writing in process			7/2 3 - Mechanical 4 - Computer
01	Model Development and Data Analysis	IES	Internship	03 1 - Mechanical 2 - Computer
02	Data Collection Analysis	IES		05 1 - Mechanical 2 - BSc Computer Science
03	Green Building, Energy Analytics, Development of Scripts & Algorithm to extract built Environment data	Qi Square		07 3 - Mechanical 4 - Computer
04	Visualization and Unity Development	IES		03 2 - Computer (TY) 2 - Computer (SY)
05	1. To work on the BTRLYF platform to upload, analyze and report energy savings potential of buildings based on open-source data provided. 2. Collecting open-source data from multiple geographies, simulate the buildings, and verify the statistical fit between simulated and actual data			06 3 - Computer 3 - BSc Statistics

06	<p>1. Creating a mobile application for calculating electricity consumption and/or Carbon footprint of a household using flutter.</p> <p>2. Providing Analysis reports and Dashboards to monitor energy consumption and providing recommendations based on previously simulated IES-VE projects.</p> <p>3. Creating an Energy Database of various residential and industrial hubs, location-wise.</p> <p>4. Creating an informative website to display various research and virtual energy audit applications.</p> <p>5. Allowing users to study and interact with previous case studies and Members of the Eco-campus at Vishwakarma University.</p> <p>6. Allowing team members to post and add articles and various blogs related to programs and industrial connect with Eco-Campus</p> <p>7. Implementation of various energy monitoring systems and pre-defined methodologies to calculate effective energy cost.</p> <p>8. Development of a mobile application to control various appliances in the building of a campus. Also storing and monitoring the energy consumption through the same application.</p>	Energy & Sustainability CoE of VU		04 4 – Computer Final year
07	Development of a New dashboard	At IES		01 1 – Computer Final year
08	IUCEE Clean & Green campus Course Phase 2	IUCEE team of Global Experts	Internship	04 2 – Computer 2 – A&D

Photo Gallery



Guest Sessions Under Eco-Campus Drive

Contact Us

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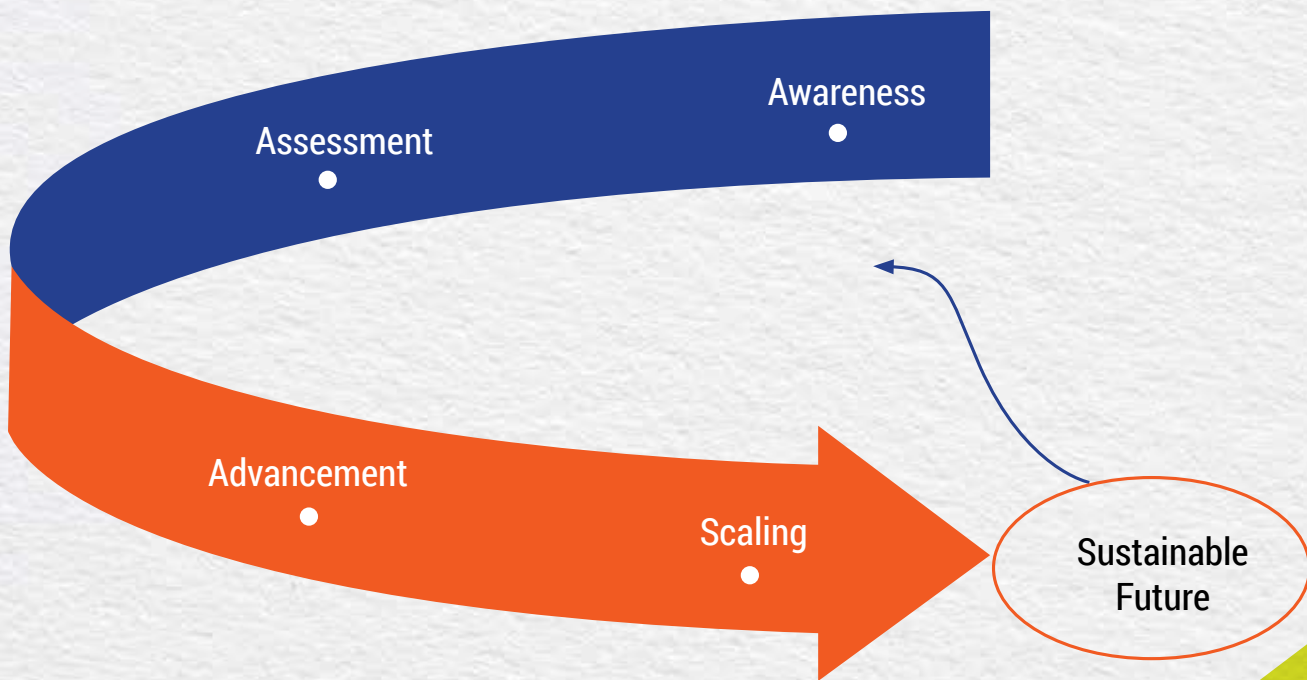
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Road Map for Future



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