

**VAC Name: Basic Renewable Power Harvesting
(VAC-P-002)**



Department of Physics
KERAL VERMA SUBHARTI COLLEGE OF SCIENCE
SWAMI VIVEKAN AND SUBHARTI UNIVERSITY
Subhartipuram, NH-58 Delhi-Haridwar-Meerut Bypass Road, Meerut -250005



Ref No - SUSU/KUSIAS/Phy1 - 12

Dated 13-08-2018

NOTICE

It is to inform to all students of UG and PG that the department of physics introduced a Value added course from the date 01/09/2018 to 08/12/2018. The topics are as follows.

- 1 Instrumentation Skills Development
- 2 Basic Renewable Power Harvesting

Interested students give their name to HOD Physics

HOD

Value Added Course II

Course Name: Basic Renewable Power Harvesting CODE VAC-P-007

Objectives: To acquire basic knowledge about Fossil fuels and Alternate Sources of energy, Solar energy, Wind Energy harvesting, Ocean Energy and Geothermal Energy.

Unit I: Fossil fuels and Alternate Sources of energy: Fossil fuels and nuclear energy, their limitation, need of renewable energy, non-conventional energy sources. An overview of developments in Offshore Wind Energy, Tidal Energy, Wave energy systems, Ocean Thermal Energy Conversion, solar energy, biomass, biochemical conversion, biogas generation, geothermal energy tidal energy, Hydroelectricity.

Unit II: Solar energy: Solar energy, its importance, storage of solar energy, solar pond, applications of solar pond and solar energy, solar water heater, flat plate collector, solar distillation, solar cooker, solar green houses, solar cell, absorption air conditioning. Need and characteristics of photovoltaic (PV) systems, PV models and equivalent circuits, and sun tracking systems.

Unit III: Wind Energy harvesting: Fundamentals of Wind energy, Wind Turbines and different electrical machines in wind turbines, Power electronic interfaces, and grid interconnection topologies.


Ocean Energy: Ocean Energy Potential against Wind and Solar, Wave Characteristics and Statistics, Wave Energy Devices. Tide characteristics and Statistics, Tide Energy Technologies, Ocean Thermal Energy, Osmotic Power, Ocean Bio-mass.

Unit IV: Geothermal Energy: Geothermal Resources, Geothermal Technologies.

Hydro Energy: Hydropower resources, hydropower technologies, environmental impact of hydro power sources.

Piezoelectric Energy harvesting: Introduction, Physics and characteristics of piezoelectric effect, materials and mathematical description of piezoelectricity, Piezoelectric parameters and modeling piezoelectric generators, Piezoelectric energy harvesting applications, Human power

Electromagnetic Energy Harvesting: Linear generators, physics mathematical models, recent applications Carbon captured technologies, cell, batteries, power consumption, Environmental issues and Renewable sources of energy, sustainability.


(110 P)



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Report on Value added course Basic Renewable Power Harvesting

*Value added course on **Basic Renewable Power Harvesting** was organized from 01-09-18 to 08-12-2018 in department of physics , Keral Verma Subharti College Of Science, Swami Vivekanand Subharti University, Meerut. The speaker was Dr. Nirdesh Kumar . A total number of forty two participate were present. The encompass topic **Basic Renewable Power Harvesting**. The purpose of the course to give the holistic knowledge of renewable energy to the student.*


(HOD)


Registrar
Swami Vivekanand
Subharti University
MEERUT



Participants during Value added course : Basic renewable Power Harvesting

**List of
Participants
Value Added Course on “Basic Renewable Power Harvesting”**

S. No.	Name of Students
1.	Lovey
2.	Sujat Ali
3.	Dolly Tyagi
4.	Soniya
5.	Sangeeta
6.	Prince Malik
7.	Pooja
8.	Harsh Vardhan
9.	Mudrika
10.	Ritika Tyagi
11.	Akshit Chauhan
12.	Amit Kumar
13.	Amit Kumar Moral
14.	Amrita Kardam
15.	Ankit Chauhan
16.	Ankit Chhoker
17.	Mohd Shadab
18.	Muddasir
19.	Mukul Tyagi
20.	Najish Praveen
21.	Neha Saroha
22.	Nidhi Pal
23.	Nishant Anand
24.	Nishant Sharma
25.	Paridhi Goel
26.	Vikas Rathor
27.	Vikrant Kumar
28.	Vivek Kumar
29.	Ashish Rana
30.	Himanshu
31.	Sandeep Kumar
32.	Sangeeta Gautam
33.	Shubham Saini
34.	Devika
35.	Sakshi
36.	Deepak Chodhary
37.	Md Anas
38.	Amit Pal
39.	Sheetal
40.	Aayushi
41.	Swati
42.	Sachin Rana


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 Swami Vivekanand
 Subharti University
 MEERUT


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