

VALUE ADDED COURSES ON BASIC OF RENEWABLE ENERGY AND HARVESTING

(01-02-21 to 08-04-2021)



COURSE CODE : VAC-P-002)

The objective of the program

The main objective of this course is to create awareness among students about the new technologies arising day to day. It updates the required knowledge and improve the applicability. The Practical work related with data interpretations therefore energy skill plays a pivotal role in increasing their employability.

Basic Renewable Energy:

The **objective** of this kind of **energy** is to replace the use of fossil fuels which are mainly made of hydro-carbons and hence result in pollution. ... We all need to shift to these **resources** of **energy** and try to avoid usage of fossil fuels. Reusable or **renewable energy** is greener and keeps our planet clean

COURSE COORDINATOR : Dr Nirdesh Kuamr
(Associate Professor)

Department of Physics (FOS)

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Department of Physics

KERAL VERMA SUBHARTI COLLEGE OF SCIENCE

SWAMI VIVEKAN AND SUBHARTI UNIVERSITY

Subhartipuram, NH-58 Delhi-Haridwar-Meerut Bypass Road, Meerut -250005

REGISTRATION FORM

For

CODE VAC-P-002

Course: Basic of Renewable Energy And Energy Harvesting

(01-02-21 to 08-04-2021)

Student's
name:

Enrollment
No.:

Programme:
....

Year/Semester:
...

Contact
No.:

Email Id
(optional):

Signature:

Course Coordinator


Registrar
Swami Vivekanand
Subharti University
MEERUT

Value Added Course II

Course Name: Basic of Renewable Energy And Energy Harvesting VAC-P-002

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: 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 differentelectrical 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.

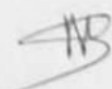
Unit IV: Geothermal Energy: Geothermal Resources, Geothermal Technologies.

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.


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Swami Vivekanand
Subharti University
MEERUT



Report on
Value added course on
Basic of Renewable Energy and Energy Harvesting

Value added course on Basic Renewable Energy and Energy Harvesting was organized from 01-02-21 to 08-04-2021 in department of physics, Keral Verma Subharti College Of Science, Swami Vivekanand Subharti University, Meerut. The speaker was Dr Nirdesh. A total number of Ten participants were present. The encompassed topic Basic Renewable Energy and Energy Harvesting. The purpose of the course was to give the holistic knowledge of renewable energy to the student.




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K V FACULTY OF SCIENCE, SWAMI VIVEKANAND

SUBHARTI UNIVERSITY

DEPARTMENT OF PHYSICS

CODE VAC-P-002

Course: Basic of Renewable Energy And Energy Harvesting

SN.	EN. NO.	NAME
1	1906000001360	VINAY KUMAR RANA
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3	1906000001363	UDIT CHAUHAN
4	1906000001364	AKSHAY KUMAR
5	1906000001365	KM SWETA RANI
6	1906000001366	SAHIL HASAN
7	1906000001367	RADHIKA
8	1906000001368	KM HIMANSHI
9	1906000001370	SHIVAM


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DEAN

PHOTOGRAPHS

