Advance Renewable Power Harvesting

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 - SVSU/KVSCOS/Phy/ /-21

Dated 11-10-2019

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 19/10/2019 to 09/01/2020. The topics are as follows. Attending of these course is beneficial to all students The name of the course as follows. Course duration will be 30 hr.

1 Equipments Skills Enhancement

2 Advance Renewable Power Harvesting

Interested students give their name to HOD Physics

HOD

Registrar
Swami Vivekanand
Subharti University
MEERUT

CC- Dean (KVSCOS)

Notice board (All)

Name of VAC Course: Advance Renewable Power Harvesting (VAC-P-004)

VALUE ADDED COURSES ON
Advance Renewable Power Harvesting
(VAC-P-004)
(19-10-2019 TO 09-01-2020)

Basic Skills for Equipments
To control the parameters in a process or in a particular system, devices such as microprocessors, microcontrollers or PLCs are used, but their ultimate aim is to control the parameters of a system .Presenting results to senior research staff. researching and writing papers, reports and reviews. Keeping up to date with relevant scientific and technical developments

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.

COURSE COORDINATOR : DR. NIRDESH KUMAR
(Associate Professor)
(DEPARTMENT OF PHYSICS KVSCOS)
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DEPARTMENT OF PHYSICS
KERAL VERMA SUBHARTI COLLEGE OF SCIENCE, SWAMI VIVEKANAND
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Subhartipuram, NH-58 Delhi-Haridwar-Meerut Bypass Road, Meerut -250005

Academic Section's copy

COURSE REGISTRATION FORM

(To be filled up in consultation with the Course Advisor at the time of admission)

Roll No. : ..... **Name :** .....

Programme : ..... **Year :** .....

Courses to be offered :

Course Code	Course Title	Cr.	L	T	P	*Course Type
	Basic Instrumentation Skills VAC-P-001					
	Renewable Energy And Energy Harvesting VAC-P-002					

Value Added Course II

Course Name: Advance Renewable Power Harvesting CODE VAC-P-004

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 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.

Attendance Sheet

Advance Renewable Power Harvesting	VAC-P-004	Chitrangi Bhardwaj
		AzmainSaifi
		Rohan Sagar
		Rajul Tyagi
		Bhavna Sharma
		Abhishek
		ShahanaSaifi
		Disha Sangwan
		Mudrika
		Ritika Tyagi
		Prince Malik
		Shivam Bhardwaj
		Shubham Singh
		Vijay Kumar
		Aakash Choudhary
		Amit Pal
		Ayush Malik
		Bhavishya Kr Singh
		Kartik Puniya
		Mahima Choudhary
		Mintoo Singh
		Mohd Anas
		Neelam Rani
		Neetu Kuniyal
		Nitin Yadav
		Parul Saini
		Rajat Choudhary
		Riya Sharma
		Shalu Chhabra
		Shivani
		Shivani Singh
		Shruti Parashar
		Shubham Saini
		Devika
		Sakshi
		Deepak Chodhary
		Md Anas
		Amit Pal
		Sheetal
		Aayushi

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Report on Value added course *Advance Renewable Power Harvesting*

Value added course on ***Advance Renewable Power Harvesting*** *was organized from 19-10-19 to 09-01-2020 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 42 participate were present. The encompass topic* ***Advance Renewable Power Harvesting****. The purpose of the course was the to give the holistic knowledge of renewable energy to the student.*

(H.O.D)