



## Department of Physics

KERALA VERMA FACULTY OF SCIENCE

SWAMI VIVEKANANDA AND SUBHARTI UNIVERSITY

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

ef. no-SVSU/KVFOS/PHY/2016/49

Date: 02-08-16

### NOTICE

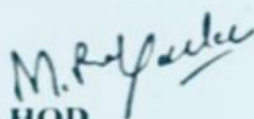
### SUBJECT - VALUE ADDED COURSE

It is to inform to all students of UG and PG that the department of physics introduced a Value added course from the date 26/08/2016 to 02/12/2016. The topics are as follows. Course duration will be 16 hr.

1 Advance Instrumentation Skills

2 Advance Renewable Energy

Interested students give their name to HOD Physics

  
HOD

  
Registrar  
Swami Vivekananda  
Subharti University  
MEERUT

CC- Dean (FOS)

Notice board(All)

**Value Added Course II**

**Course Name: Advance Renewable Energy 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: 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.

*M.P. Teal*



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**Report on Value added course Advance Renewable Energy**

*Value added course on Advance Renewable Energy was organized from 26-08-16 to 02-12-2016 in department of physics, Keral Verma faculty Of Science, Swami Vivekanand Subharti University, Meerut. The speaker was Dr. Puja Gupta. A total number of forty two participants were present. The encompass topic Basic Instrumentation Skill. The purpose of the course was to give the holistic knowledge of renewable energy to the student.*

*M. R. Verma*  
HOD  
Physics

  
Registrar  
Swami Vivekanand  
Subharti University  
MEERUT





Participants During Value Added Course: Advance Renewable Energy

**DEPARTMENT OF PHYSICS**  
**KERAL VERMA SUBHARTI COLLEGE OF SCIENCE, SWAMI VIVEKANAND**  
**SUBHARTI UNIVERSITY**  
Subhartipuram, NH-58 Delhi-Haridwar-Meerut Bypass Road, Meerut -250005

**CODE VAC-P-001**

List of students completed the

**CODE VAC-P-002**

**Course: Advance Renewable Energy**

SN	EN NO	NAME
1	1606010001926	KUMARI NANCY
2	1606010001927	KUMARI SWANI
3	1606010001928	LAVISH MALIK
4	1606010001929	LOVE TYAGI
5	1606010001930	MANISH KUMAR
6	1606010001932	MANISHA RANI PAL
7	1606010001936	MANTASHA SABRI
8	1606010001938	MAYANK DEESHWAL
9	1606010001944	MOHD TALIB
10	1606010001946	MOHD SHAHBAZ
11	1606010001950	MOHIT YADAV
12	1606010001952	MOIN SAIFI
13	1606010001958	NAZIM
14	1606010001962	NIKHIL KUMAR
15	1606010001972	PANKAJ CHOUDHERY
16	1606010001975	PARITOSH KUMAR
17	1606010001978	POOJA LOHIYA
18	1606010001979	POOJA SINGH
19	1606010001982	PRAJWAL CHAUDHARY
20	1606010002002	ROHIT KUMAR
21	1606010002003	ROHIT KUMAR
22	1606010002005	ROOP SINGH
23	1606010002007	RUCHI SINGH
24	1606010002009	SACHIN KUMAR
25	1606010002017	SHAHIR HUSSAIN
26	1606010002019	SHASHANK SWAMI
27	1606010002023	SHIVAM KUMAR
28	1606010002027	SHIVJI MISHRA
29	1606010002028	SHUBHAM MALIK

Registrar  
Swami Vivekanand  
Subharti University  
MEERUT

MP LUC

**VALUE ADDED COURSE**

**ON  
ADVANCED RENEWABLE ENERGY**



Organized by

**Department of Physics  
K V FACULTY OF SCIENCE  
SWAMI VIVEKANAND SUBHARTI UNIVERSITY, MEERUT, U.P., INDIA**

**Certificate**

This is to certify that Mr./Ms. LAVISH MADIK  
class B.Sc. PCM has participated/completed  
the value added course of 30 hours on **Advanced Renewable Energy**  
from 26-08-16 to 02-12-2016 in department of physics Keral Verma Subharti College of Science.

*Mrs. Pujya Gupta*  
**Mrs. Pujya Gupta**  
Course Coordinator

*M.P. Yadav*  
**Dr M P Yadav**  
HOD

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**Certificate**

This is to certify that Mr./Ms. MOHD. TARIQ  
class B.Sc. PCM has participated/completed  
the value added course of 30 hours on **Advanced Renewable Energy**  
from 26-08-16 to 02-12-2016 in department of physics Keral Verma Subharti College of Science.

*Mrs. Pujya Gupta*  
**Mrs. Pujya Gupta**  
Course Coordinator

*M.P. Yadav*  
**Dr M P Yadav**  
HOD



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**Certificate**

This is to certify that Mr./Ms. MAYANK DESHWAD  
class B.Sc. PCM has participated/completed  
the value added course of 30 hours on Advanced Renewable Energy  
from 26-08-16 to 02-12-2016 in department of physics Keral Verma Subharti College of Science.

*Mrs. Reja Gupta*  
Course Coordinator

*M. P. Yadav*  
Dr MP Yadav  
HOD

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SWAMI VIVEKANAND SUBHARTI UNIVERSITY, MEERUT, U.P., INDIA**

**Certificate**

This is to certify that Mr./Ms. SONIYA  
class B.Sc. PCM has participated/completed  
the value added course of 30 hours on Advanced Renewable Energy  
from 26-08-16 to 02-12-2016 in department of physics Keral Verma Subharti College of Science.

*Mrs. Puja Gupta*  
Course Coordinator

*M. P. Yadav*  
Dr MP Yadav  
HOD