



TaranathShikshanaSamsthe
Laxmi Venkatesh Desai college, Raichur
Affiliated to Raichur University, Raichur & Re-accredited by NAAC with B Grade



Index for Add-On Course

Title: Solar Energy
Academic Year: 2018 - 19

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Taranath Shikshana Samsthe



LAXMI VENKATESH DESAI COLLEGE, RAICHUR-584103.
(Affiliated to Raichur University, Raichuri. Re-Accredited by NAAC with "B" Grade)


Sri. Chandrakanth, M.Sc.,
PRINCIPAL

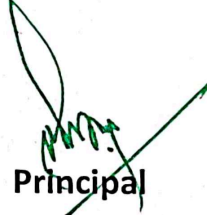
Office of the Principal
Ph:(08532)-240286, 240707
Fax:+918532 240707
e-mail: lvdrccr@gmail.com
Website: www.lvdcollege.org

Date: 10/12/2018

TO WHOMEVER IT MAY CONCERN

This is to certify that, the college has introduced the Add_On course on, "Solar Energy" with the duration of 30 hours introduced in 2018-19. The said programme is apart from the existing course curriculum.


Head of the Department


Principal

PRINCIPAL
L.V.D. College, RAICHUR-03.

Date:10.12. 2018

To
The Principal,
LVD College, Raichur.

From
Head
Department of Physics

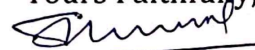
Respected Sir,


Sub: Permission to start an Add_On course.

With respect to the above sited subject I, the undersigned request you to grant permission to start an Add-on course titled "SOLAR ENERGY" to B.Sc I/II/III year students. The details of syllabus and duration are enclosed. This course helps students to build up their skills. Kindly grant the permission.

Thanking You,

Yours Faithfully,


Head of the Physics Department
L. V. D. College.
RAICHUR-584 101.

permitted

PRINCIPAL
L.V.D. College, RAICHUR-03.



Taranath Shikshana Samsthe
LAXMI VENKATESH DESAI COLLEGE RAICHUR – 584103
(Affiliated to Gulbarga University, Gulbarga)



Dr. S.M. Khened *M.Sc., Ph.D.*
Principal

e-mail: lvdrer@gmail.com.

Date: 17-12-2018

ORDER Sub: Meeting of Board of Studies members

A meeting of the following BOS constituted is hereby convened on 17/12/2018 at 11:00 AM in the Department of Physics, LVD College, Raichur

BOARD OF APPOINTMENT OF BOS MEMBERS FOR ADD-ON COURSE
SOLAR ENERGY

1)	DR. M V N Ambika Prasad Professor Department of Physics Gulbarga University, Kalaburagi	Chairman <i>[Signature]</i>
2)	DR. Purshottham Joshi Assistant Professor Department of Physics GFGC, Kalaburagi	Member <i>[Signature]</i>
3)	Sri. Chandrakanth Head of the Department Department of Physics LVD College, Raichur	Member <i>[Signature]</i> Head of the Physics Department L.V.D. College. RAICHUR-584 101

The Chairman and the members are requested to make it convenient to attend
THE BOS Meeting

[Signature]
PRINCIPAL
PRINCIPAL
L.V.D. College, RAICHUR-03.

**To
The Principal,
LVD College,
Raichur.**

Respected Sir,

Sub: Acceptance to be the chairman of BOS.

with reference to the above-cited subject I DR. M V N Ambika Prasad, Professor, Department of Physics, Gulbarga University, Kalaburagi, received your letter of request to be a Chairman of BOS, for the Add-on Course to be conducted by your college.

Hence, I give my consent and accept your request as a BOS Chairman.

Thanking You,

Yours Sincerely



**To
The Principal,
LVD College,
Raichur.**

Respected Sir,

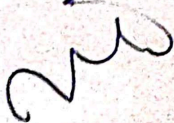
Sub: Acceptance to be a Member of BOS.

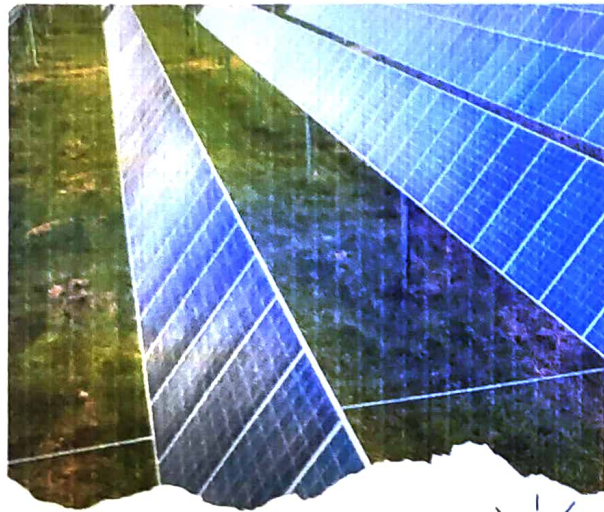
with reference to the above-cited subject I, DR. Purshottham Joshi Assistant Professor, Department of Physics, GFGC, Kalaburagi, received your letter of request to be a Member of BOS, for the Add-on Course to be conducted by your college

Hence, I give my consent and accept your request as a BOS Member.

Thanking You,

Yours Sincerely

A handwritten signature in black ink, appearing to be 'M. S.', written over the typed name 'Yours Sincerely'.





COURSE INCLUDE

All about solar energy difference between power and energy, the role of energy in development, Conventional energy sources Hydro Electric, Thermal, Nuclear, Non-Conventional Energy sources Bio-mass, geothermal, solar, wind energy, ocean energy, wave energy, advantages and disadvantages, challenges.

Non-commercial energy sources, wood, animal wastes, agricultural waste, cost of raw materials, transport problems, issues . Hour's Solar system: Energy from the sun, solar window, atmospheric effects, diffused radiations, Air mass, effect of Air Mass, seasonal effects, environmental effects on standard test conditions.







To join contact :

-  Miss.Vimala K R
(Department of physics)
-  Mr.Vijay Kumar
(Department of physics)



OBJECTIVES

-  Understand the principles that underlie the ability of various natural phenomena to deliver solar energy
-  outline the technologies that are used to harness the power of solar energy
-  discuss the positive and negative aspects of solar energy in relation to natural and human aspects of the environment


Co-ordinator
Internal Quality Assurance Cell (IQAC)
Laxmi Venkatesh Desai College, RAICHUR-03.




Taranath Shikshana Samsthe

LAXMI VENKATESH DESAI
COLLEGE
Re-Accredited by NAAC with 'B' grade

DEPARTMENT OF
PHYSICS
2018-19

OFFERS ADDON
COURSES
ON
Solar
Energy


PRINCIPAL
L.V.D. College, RAICHUR-03.



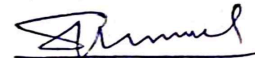
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Affiliated to Gulbarga University, Kalaburagi & Re-Accredited by NAAC with B Grade

Department of Physics

Notice

All the B.Sc I/II/III year students are here by informed that department of physics is introducing Add-on course titled "SOLAR ENERGY" interested students should register their name to the course coordinator for the certificate course in physics department on or before 24.12.2018 at 1:40 PM to 2:30 PM


HoD

Head of the Physics Department
L. V. D. College
RAICHUR-584 101

Prof.
B.A. - IV Sem

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B.Sc I year

B.Sc

Handwritten signature

B.A. - II Year.

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B.A. I

SYLLABUS
SOLAR ENERGY

COURSE OUTCOMES

- explain the principles that underlie the ability of various natural phenomena to deliver solar energy
- outline the technologies that are used to harness the power of solar energy
- discuss the positive and negative aspects of solar energy in relation to natural and human aspects of the environment

Unit- I

15hours

Introduction, Definition of Power and energy, difference between power and energy, the role of energy in development, Conventional energy sources Hydro Electric, Thermal, Nuclear, Non-Conventional Energy sources Bio-mass, geo-thermal, solar, wind energy, ocean energy, wave energy, advantages and disadvantages, challenges. Limitation of renewable energy sources their usefulness seasonal nature, requirement, and need for the use of new energy sources.

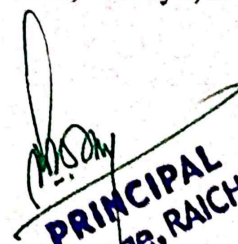
Unit- II

15hours

Commercial energy sources, fossil-fuels coal, oil, natural gas, hydro electric power, nuclear, Non-commercial energy sources, wood, animal wastes, agricultural waste, cost of raw materials, transport problems, issues . Hour's Solar system: Energy from the sun, solar window, atmospheric effects, diffused radiations, Air mass, effect of Air Mass, seasonal effects, environmental effects on standard test conditions.

Reference

- Fundamentals of Renewable Energy Systems Paperback – D.Mukherjee, New Age International Publisher; First edition (2011).
- Renewable energy systems; David M, Buchla, Thomas E-kissell, Thomas, L Floyd; Pearson India Education Services Pvt. Ltd. 2017
- Solar Power Hand Book, Dr. H. Naganagouda(2014)

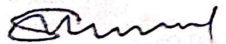

PRINCIPAL
L.V.D. College, RAICHUR-03.

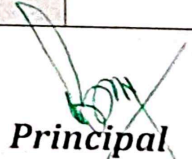
TARANATH SHIKSHANA SAMSTHE'S

LAXMI VENKATESH DESAI COLLEGE , RAICHUR.

ADD ON COURSE TIME TABLE FOR B.Sc II, IV & VI SEMESTER, DEPARTMENT OF PHYSICS, 2018-19.

TIME DAYS	09-30 TO 10-20 AM (THEORY)	10-20 TO 12-00 PM (IV SEM LAB)	12-00 TO 12-50PM (THEORY)	12-00 TO 1-40PM (II SEM LAB)	01-40 TO 02-30 PM	02-30 TO 04-10 PM (VI SEM LAB)	04-10 TO 5- 00 PM (THEORY)
Monday					LUNCH BREAK		ADD ON COURSE
Tuesday							ADD ON COURSE
Wednesday							ADD ON COURSE
Thursday							ADD ON COURSE
Friday							ADD ON COURSE
Saturday							ADD ON COURSE


Head of Department.
 Head of the Physics Department
 L.V.D. College,
 RAICHUR-584101


Principal
PRINCIPAL
 L.V.D. College, RAICHUR-03.

Laxmi Venkatesh Desai College, Raichur

Affiliated to Gulbarga University, Kalaburagi & Re-Accredited by NAAC with B Grade

Attendance Sheet

Department of Physics

Value added certificate Course : SOLAR ENERGY

Faculty Name: smt. VIMALA

Attendance :2019-20

Sl. No	Register No	Name of the Student	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
1.	1953115	POOJA	P	A	D	D	P	A	A	A	P	P	P	A	P	P	P	P	P	P	P	P	P	A	A	P	P	P	P	P	P	P	P	
2.	1953126	ANKITHA	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
3.	1953175	ANJINEYYA	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
4.	1953188	PAVITHRA	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
5.	1953224	TEJASWINI	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
6.	1953271	VIENDRA R K	P	P	A	D	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
7.	1953309	JAYASHREE	A	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
8.	1953318	HUSENAPPA	D	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
9.	1953454	NARESH	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
10.	1953498	C NAVEEN	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
11.	1953529	ABHISHEK	P	P	A	D	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
12.	1953395	RAKESH	P	P	D	D	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
13.	Sign of faculty		$\frac{2}{1}$ U	$\frac{3}{1}$ U	$\frac{5}{1}$ U	$\frac{7}{1}$ U	$\frac{8}{1}$ U	$\frac{11}{1}$ U	$\frac{12}{1}$ U	$\frac{14}{1}$ U	$\frac{17}{1}$ U	$\frac{18}{1}$ U	$\frac{22}{1}$ U	$\frac{4}{2}$ U	$\frac{5}{2}$ U	$\frac{8}{2}$ U	$\frac{9}{2}$ U	$\frac{11}{2}$ U	$\frac{12}{2}$ U	$\frac{16}{2}$ U	$\frac{19}{2}$ U	$\frac{22}{2}$ U	$\frac{27}{2}$ U	$\frac{27}{2}$ U	$\frac{1}{3}$ U	$\frac{2}{3}$ U	$\frac{4}{3}$ U	$\frac{8}{3}$ U	$\frac{9}{3}$ U	$\frac{12}{3}$ U	$\frac{15}{3}$ U	$\frac{19}{3}$ U	$\frac{22}{3}$ U	$\frac{22}{3}$ U

Vimala
Signature of Faculty

[Signature]
Signature of HOD
Head of the Physics Department

[Signature]
Signature of Principal
PRINCIPAL

**L. V. D. College,
RAICHUR-584 101,**

L.V.D. College, RAICHUR-03.

Laxmi Venkatesh Desai College, Raichur

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Department of Physics

Report of Add_On course

Department of Physics conducted add-on Course for the interested students from 02.01.2019 to 27.03.2019. Around 32 students were enrolled for the course. After completing this course the students were able to understand about the renewable energy and commercial energy sources. Students have taken the benefits from the course.

Duration:30 hrs

Started on: 02.01.2019


Completed on: 27.03.2019

Name of the Faculty: Smt.Vimala

Total No of Students admitted: 31

Total No of classes admitted: 30

Total No of Students benefited: 31


Head of the Physics Department
L. V. D. College,
RAICHUR-584 101.



Taranath Shikshana Samsthe
Laxmi Venkatesh Desai College, Raichur.

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Course Completion Certificate

This Certificate is awarded to Miss/Mr. HUSENAPPA

for successfully completing the course in "SOLAR ENERGY" conducted by Department of Physics year
2018-19.

Faculty Incharge

Head of the Department
Head of the Physics Department
L. V. D. College.
RAICHUR-584 102

Principal
PRINCIPAL
L.V.D. College, RAICHUR-03.



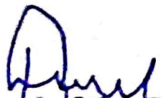
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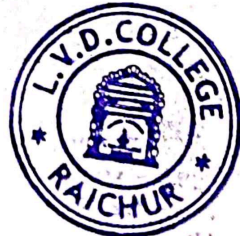
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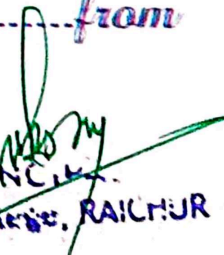
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Certificate

This is to Certify that Miss. / Mr. Arun Kumar
of B.Sc. has completed the Certificate Course in
Solar Energy
Conducted by the Department of Physics from
02.01.2019 to 27.03.2019


Head of the Department




PRINCIPAL
L.V.D. COLLEGE, RAICHUR
Principal



Taranath Shikshana Samsthe

LAXMI VENKATESH DESAI COLLEGE RAICHUR


(Re-Accredited by NAAC with 'B' Grade)

Certificate

This is to Certify that Miss. / Mr. Ningayya
of B.Sc has completed the Certificate Course in
Solar Energy
Conducted by the Department of Physics from
02.01.2019 to 27.03.2019


Head of the Department




PRINCIPAL
L.V.D. College, RAICHUR-03.
Principal

Taranath Shikshana Samsthe's
LAXMI VENKATESH DESAI COLLEGE, RAICHUR.
DEPARTMENT OF PHYSICS
Course Title – Solar Energy

Time: 30 Minutes

Max Marks: 40

Instructions to candidates:

1. Answer all the questions.

-
- (1) India is utilizing Solar energy through _____
 - (A). Photovoltaic route
 - (B). Photometric route
 - (C). Photo power
 - (D). Photosynthesis
 - (E). None of these

 - (2) The base of power generating systems is ____
 - (A). Biomass gasification
 - (B). Coal gasification
 - (C). Solar energy
 - (D). Wind energy
 - (E). None of these

 - (3) The purpose of Wind generator is _____
 - (A). Power generation
 - (B). Heat generation
 - (C). Power dissipation
 - (D). Power consumption
 - (E). None of these

 - (4) The materials are de-localized in which _____ is present.
 - (A). Electrons
 - (B). Protons
 - (C). Neutrons
 - (D). Positrons
 - (E). None of these

 - (5) Photovoltaic types of solar cells are usually connected electrically in _____ manner.
 - (A). Series
 - (B). Parallel
 - (C). Randomly
 - (D). Neither series nor parallel
 - (E). None of these

- (6) Select the Non-conventional energy sources from the following
- (A). Renewable
 - (B). Non-renewable
 - (C). Produced from electricity
 - (D). Produced from heat
 - (E). None of these
- (7) Power is generated from _____ in Timarpur.
- (A). Urban waste
 - (B). Solar energy
 - (C). Hydropower
 - (D). Wind energy
 - (E). None of these
- (8) Electricity generating is the main application of solar cells which is generated from _____
- (A). Water
 - (B). Sunlight
 - (C). Wind
 - (D). Biomass
 - (E). None of these
- (9) India started the use of non-conventional energy sources in _____
- (A). 1940
 - (B). 1950
 - (C). 1960
 - (D). 1970
 - (E). None of these
- (10) The electricity can be produced by solar power, which is a good _____ source.
- (A). Commercial
 - (B). Economical
 - (C). Commercial and economical
 - (D). Neither commercial nor economical
 - (E). None of these
- (11) We can recharge the portable devices by _____
- (A). Solar photovoltaic cells
 - (B). Solar panels
 - (C). Solar batteries
 - (D). Solar dishes
 - (E). None of these

- (12) The special composition of the solar cells allows the electrons to flow in ____
- (A). Opposite direction
 - (B). Multiple directions
 - (C). Single direction
 - (D). Random direction
 - (E). None of these
- (13) We can use solar cells in calculators.
- (A). True
 - (B). False
 - (C). None of these
- (14) In sunlight _____ hits the panel of solar cells.
- (A). Dust
 - (B). Photons
 - (C). Electrons
 - (D). Protons
 - (E). None of these
- (15)

Laxmi Venkatesh Desai College, Raichur

(Affiliated to Gulbarga University, Kalaburagi & Re-Accredited by NAAC with B Grade)

Value added certificate Course: SOLAR ENERGY MARKS SHEET

SL.NO	REGISTER NUMBER	NAME OF THE STUDENT	MARKS
1.	1953115	POOJA	38
2.	1953126	ANKITHA	37
3.	1953175	ANJINEYYA	39
4.	1953188	PAVITHRA	39
5.	1953224	TEJASWINI	39
6.	1953271	VIJENDRA R K	39
7.	1953309	JAYASHREE	40
8.	1953318	HUSENAPPA	40
9.	1953454	NARESH	38
10.	1953498	C NAVEEN	39
11.	1953529	ABHISHEK	40
12.	1953395	RAKESH	40
13.	1953117	AKSHATA BAI	40
14.	1953124	VENKAT PRASAD	40
15.	1953137	MAHESH KATIKAR	39
16.	1953151	STEVA ADAM SIMON	39
17.	1953161	YASHODHA	37
18.	1953167	SANGEETA	38
19.	1953176	ARUNKUMAR	40
20.	1953199	MADHURI INAMDAR	40
21.	1953207	BASAVARAJ	38
22.	1953224	TEJASHWINI B	38
23.	1953236	SHARADHA	38
24.	1953233	B VIBHA	40
25.	1953254	DIVYATEJA	40
26.	1953260	VEERESH	40
27.	1953272	RANJEET NAYAK	40
28.	1953292	VENKATESH K	40
29.	1953304	MAMATHA YADAV	40
30.	1953358	GEETA	39
31.	1953372	ARUNKUMAR	40
32.	1953416	NINGAYYA	40

John