SYLLABUS/ CURRICULUM

PANDIAN SARASWATHI YADAV ENGINEERING COLLEGE

(Approved by AICTE & Affiliated to Anna University, Chennai)

Madurai - Sivagangai Highway, Arasanoor, Thirumansolai Post, Sivagangai Dt. - 630 561, Tamilnadu
Mobile : 9842102628, 7373002628 Email: info@psyec.edu.in Website : www.psyec.edu.in

City Office : 10, Pandian Saraswathi St, Sivagami Nagar, Narayanapuram, Madurai - 625 014. Telefax- 0452 2682338, Mobile : 98423-02628

Department of Electrical And Electronics Engineering

Academic Year 2022-2023

VACEE2223SPVD-Solar PV Systems Design

OBJECTIVE OF THE COURSE

- Understand the basic principles of solar energy and photovoltaic technology.
- Learn how to design, size, and optimize solar PV systems.
- Gain knowledge of the components and configurations of PV systems.
- Perform technical and economic analyses of PV systems.
- Ensure compliance with standards and regulations.
- Develop practical skills through hands-on projects and laboratory work.

CHAPTER 1:

Types of Solar Power Plant: Grid connected solar Power Plant-Grid interactive solar power plant -Net Metering Solar Power Plant-Off-Grid / Hybrid solar power plant-Schemes of solar power plant

CHAPTER 2:

Selection of site and shadow analysis: PV module structure inter row spacing calculation-Pitch analysis--Selection of PV module tilt angle-Near shading object calculation-Site survey and plant assessment-Type of solar radiation-Irradiance assessment and comparison-Solar Radiation Data-Sun path Diagram-Defining the Position of the Sun-Solar Altitude-Geometric Effects-Tilting Solar Modules-Magnetic North & True North

CHAPTER 3:

Selection of PV module technology: Introduction-Crystalline technology-Thin film technology-Bi-facial technology-Comparison between PV module technology-Comparison between solar power plant energy out put

CHAPTER 4:

Selection of PV module (cells and BOM) and sizing: Types Crystalline module cells-Manufacturing process of PV cells-Comparison between mono crystalline-Selection of PV cells-Selection of front and rear sheet-Selection of PV module glass-Selection of EVA sheet , Bus bar and frame-Characteristics of a Solar Cell- Power Characteristics of a Solar Cell-Fill factor and Equivalent Solar cell Circuit-STC and NOCT

CHAPTER 5:

Inverters Selection and Sizing (Grid Connection and Off Grid): Types of solar inverter-Selection of string /central / off grid inverter-Selection of power conditioning unit (PCU)-Sizing of solar inverter for roof top and grid connected projects-Selection and sizing of string inverter-Selection and sizing of central inverter-AC/DC overloading calculation and losses-Protection requirement of solar inverter-Passive and active protection-Anti- islanding protection-Mounting arrangement of string inverter-IEC/IEEE /Grid Compliance of inverters-Grid-Connected Inverters vs. Stand-Alone Inverters-Inverter Communication and remote monitoring-Inverter Products For Use In India

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OUTCOMES:

- To pursue careers in the solar energy industry, equipped with the knowledge and skills necessary to design, implement, and manage solar PV systems effectively.
- Evaluate the potential of new technologies and their integration into existing systems.

Total: 35 hours

Course Coordinator **HOD/EEE** **PRINCIPAL**

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Department of Electrical And Electronics Engineering
Academic Year 2022-2023
VACEE2223SPVD-Solar PV Systems Design
Course Schedule

Date	Time	TOPICS
06/02/2023	9.00 am to 12.30 pm 1.00 pm to 5.00 pm	**Types of Solar Power Plant:** Grid connected solar Power Plant-Grid interactive solar power plant -Net Metering Solar Power Plant-Off-Grid / Hybrid solar power plant-Schemes of solar power plant
07/02/2023	9.00 am to 12.30 pm 1.00 pm to 5.00 pm	**Selection of site and shadow analysis:** PV module structure inter row spacing calculation-Pitch analysis--Selection of PV module tilt angle-Near shading object calculation-Site survey and plant assessment-Type of solar radiation-Irradiance assessment and comparison-Solar Radiation Data-Sun path Diagram-Defining the Position of the Sun-Solar Altitude-Geometric Effects-Tilting Solar Modules-Magnetic North & True North
08/02/2023	9.00 am to 12.30 pm 1.00 pm to 5.00 pm	**Selection of PV module technology:** Introduction-Crystalline technology-Thin film technology-Bi-facial technology-Comparison between PV module technology-Comparison between solar power plant energy out put
09/02/2023	9.00 am to 12.30 pm 1.00 pm to 5.00 pm	**Selection of PV module (cells and BOM) and sizing:** Types Crystalline module cells-Manufacturing process of PV cells-Comparison between mono crystalline-Selection of PV cells-Selection of front and rear sheet-Selection of PV module glass-Selection of EVA sheet , Bus bar and frame-Characteristics of a Solar Cell- Power Characteristics of a Solar Cell-Fill factor and Equivalent Solar cell Circuit-STC and NOCT
10/02/2023	9.00 am to 12.30 pm 1.00 pm to 5.00 pm	**Inverters Selection and Sizing (Grid Connection and Off Grid):**Types of solar inverter-Selection of string /central / off grid inverter-Selection of power conditioning unit (PCU)-Sizing of solar inverter for roof top and grid connected projects-Selection and sizing of string inverter-Selection and sizing of central inverter-AC/DC overloading calculation and losses-Protection requirement of solar inverter-Passive and active protection-Anti- islanding protection-Mounting arrangement of string inverter-IEC/IEEE /Grid Compliance of inverters-Grid-Connected Inverters vs. Stand-Alone Inverters-Inverter Communication and remote monitoring-Inverter Products For Use In India

Total Hours 35

Tea Break : 10:40 am to 10:55am & 02:45 pm to 15:00 pm
Lunch Break : 12:30pm to 01:00pm

Course Coordinator **HOD/EEE** **PRINCIPAL**

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PANDIAN SARASWATHI YADAV ENGINEERING COLLEGE

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Academic Year 2022 – 2023

One page Report

Name of the course : **Solar PV Systems Design**
Development Course Code : **VACEE2223SPVD**
Course Coordinator : Mrs.K.JeyaPriya
Date/Duration : 06.02.2023-10.02.2023 — 35 hours

I here affirm that the Third and Final Year students of strength 27 have been taught the value-added course tittle "**Solar PV Systems Design** " as per the syllabus and completed within the stipulated time duration.

I confirm that the value-added course titled "**Solar PV Systems Design**" has been conducted in the beginning of the semester and course delivery along with the attendance of the students was recorded.

I confirmed that all the students were actively participated in the course and the eligible students were certified for the course.

Mr.K.JeyaPriya,
AP/EEE
Course Co-Ordinator

Mrs.S.Pandimeena,
AP/EEE
Head of the Department

Dr.R.RAJA,
Principal

Dr. R. RAJA M.E., Ph.D.,
PRINCIPAL
PANDIAN SARASWATHI YADAV
ENGINEERING COLLEGE
Arasanoor - Thirumansolai P.O-630 561
Sivagangai Dist. Tamil Nadu

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ASSESSMENT PROCEDURE

PANDIAN SARASWATHI YADAV ENGINEERING COLLEGE
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Department of Electrical And Electronics Engineering
Academic Year 2022-2023
VACEE2223SPVD-Solar PV Systems Design

Assessment Questions with Answer

1. A solar cell converts light energy into _____
a) Electrical energy
b) Thermal energy
c) Sound energy
d) Heat energy
Answer: a

2. There are three types of the solar cells.
a) True
b) False
Answer: a

3. Series and parallel combination of the solar cell is known as _____
a) Solar array
b) Solar light
c) Solar sight
d) Solar eye
Answer: a

4. Full form of FF in the solar field is _____
a) Form factor
b) Fill factor
c) Face factor
d) Fire factor
Answer: b

5. Calculate Fill factor using the data: Pmax=15 W, Voc=18 V, Isc=4 A.
a) .65
b) .59
c) .20
d) .98
Answer: c

6. Material used for making solar cell is _____
a) Silicon
b) Carbon
c) Sodium
d) Magnesium
Answer: a

7. The term photo voltaic comes from _____
a) Spanish
b) Greek
c) German
d) English
Answer: b

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8. A typical output of a solar cell is
A. 0.1 V
B. 0.26 V
C. 1.1 V
D. 2 V
Answer:B

9. The efficiency of a solar cell may be in the range
A. 2 to 5%
B. 10 to 15%
C. 30 to 40%
D. 70 to 80%
Answer:B

10. A module in a solar panel refers to
a. Series arrangement of solar cells.
b. Parallel arrangement of solar cells.
c. Series and parallel arrangement of solar cells.
d. None of the above.
Answer:C

11. The current density of a photo voltaic cell ranges from
a. 10 – 20 mA/cm2
b. 40 – 50 mA/cm2
c. 20 – 40 mA/cm2
d. 60 – 100 mA/cm2
Answer: b

12. . The function of a solar collector is to convert.....
A. Solar Energy into Electricity
B. Solar Energy radiation
C. Solar Energy thermal energy
D. Solar Energy mechanical energy
Answer:C

13. What is the rate of solar energy reaching the earth surface?
a) 1016W
b) 865W
c) 2854W d
) 1912W
Answer: a

14. What is total amount of solar energy received by earth and atmosphere?
a) 3.8 X 1024 J/year
b) 9.2 X 1024 J/year
c) 5.4 X 1024 J/year
d) 2.1 X 1024 J/year
Answer: a

15. The process of converting light (photons) to electricity (voltage) is called:
a) PV effect.
b) solar cell.
c) radiation.
Answer: a

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Department of Electrical And Electronics Engineering

Academic Year 2022-2023

VACEE2223SPVD-Solar PV Systems Design

Assessment Test Paper

REGISTER NUMBER: 912020105011

NAME OF THE STUDENT: P. Swathi

14/15

1. A solar cell converts light energy into _____
a) Electrical energy
b) Thermal energy
c) Sound energy
d) Heat energy

2. There are three types of the solar cells.
a) True
b) False

3. Series and parallel combination of the solar cell is known as _____
a) Solar array
b) Solar light
c) Solar sight
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4. Full form of FF in the solar field is _____
a) Form factor
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a) .65
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a) Silicon
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d) Magnesium

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b) Greek
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d) English

8. A typical output of a solar cell is

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V
.1 V
. 2 V

9. The efficiency of a solar cell may be in the range
A. 2 to 5%
B. 10 to 15%
C. 30 to 40%
D. 70 to 80%

10. A module in a solar panel refers to
a. Series arrangement of solar cells.
b. Parallel arrangement of solar cells.
c. Series and parallel arrangement of solar cells.
d. None of the above.

11. The current density of a photo voltaic cell ranges from
a. 10 – 20 mA/cm2
b. 40 – 50 mA/cm2
c. 20 – 40 mA/cm2
d. 60 – 100 mA/cm2

12. . The function of a solar collector is to convert.....
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a) 3.8 X 1024 J/year
b) 9.2 X 1024 J/year
c) 5.4 X 1024 J/year
d) 2.1 X 1024 J/year

15. The process of converting light (photons) to electricity (voltage) is called:
a) PV effect.
b) solar cell.
c) radiation.

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Pandian Saraswathi yadav Engineering College,Arasanoor -630561

Department of Electrical and Electronics Engineering

Student Performance Sheet

Academic Year : 2022-2023
Cource Code : VACEE2223SPVD
Course Name : Solar PV Systems Design
Duration of hours : 35
Period of Course : 06.02.2023-10.2.2023

Assessment Mark			Marks
Sl. No	Register Number	Student Name	
1	912020105001	S.BOSE	76
2	912020105002	M.DHANAPRAKASH	75
3	912020105003	D.DHARINISHRI	85
4	912020105005	L.DINESHKUMAR	86
5	912020105006	P.GOBI	89
6	912020105007	P.GURUPRASATH	90
7	912020105008	M.PRIYADHARSHINI	93
8	912020105009	S.SANJAY	95
9	912020105010	B.SANTHOSHINI	94
10	912020105011	P.SWATHI	90
11	912020105012	A.THANVEERAHAMED	94
12	912020105013	S.AJAYSETHUPATHI	93
13	912020105302	K.MOHANASUNDARAM	92
14	912020105304	A.PRAGALATHAN	91
15	912020105305	R.SATHYA	90
16	912019105001	T.BABU	88
17	912019105002	K.DINESH	86
18	912019105003	J.GODSON	85
19	912019105004	M.KAVIYARASU	84
20	912019105005	MRMADHANAGOPALAN	83
21	912019105006	K.MOORTHY	82
22	912019105007	M.PANTHEESWARAN	81
23	912019105008	A.SANJEEVKUMAR	75
24	912019105009	S.SANTHOSHKUMAR	78
25	912019105010	R.SIVANESAN	77
26	912019105012	M.SRINALAVIKA	80
27	912019105013	M.VALLARASU.	81

Course coordinator HOD/EEE PRINCIPAL

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STUDENTS ATTENDANCE

Pandian Saraswathi yadav Engineering College,Arasanoor -630561
Department of Electrical and Electronics Engineering
Student Attendance Sheet

Academic Year : 2022-2023
Cource Code : VACEE2223SPVD
Course Name : Solar PV Systems Design
Duration of hours : 35
Period of Course : 06.02.2023-10.2.2023

Attendance Sheet			Date:					
Sl. No	Register Number	Student Name	09.00 am - 10.00 am	10.00 am - 11.00 am	11.15 am - 12.15pm	01.00 pm - 02.00 pm	02.00 pm - 03.00 pm	03.15 pm - 04.15 pm
1	912020105001	S.BOSE						
2	912020105002	M.DHANAPRAKASH						
3	912020105003	D.DHARINISHRI						
4	912020105005	L.DINESHKUMAR						
5	912020105006	P.GOBI						
6	912020105007	P.GURUPRASATH						
7	912020105008	M.PRIYADHARSHINI						
8	912020105009	S.SANJAY						
9	912020105010	B.SANTHOSHINI						
10	912020105011	P.SWATHI						
11	912020105012	A.THANVEER AHAMED						
12	912020105301	S.AJAYSETHUPATHI						
13	912020105302	K.MOHANASUNDARAM						
14	912020105304	A.PRAGALATHAN						
15	912020105305	R.SATHYA						
16	912019105001	T.BABU						
17	912019105002	K.DINESH						
18	912019105003	J.GODSON						
19	912019105004	M.KAVIYARASU						
20	912019105005	MP.MADHANAGOPALAN						
21	912019105006	K.MOORTHY						
22	912019105007	M.PANTHEESWARAN						
23	912019105008	A.SANJEEVKUMAR						
24	912019105009	S.SATHISHKUMAR						
25	912019105010	R.SIVANESAN						
26	912019105012	M.SRIMALAVIKA						
27	912019105013	M.VALLARASU						

Course coordinator HOD/EEE PRINCIPAL

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Pandian Saraswathi yadav Engineering College,Arasanoor -630561
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Student Attendance Sheet

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6	912020105007	P.GURUPRASATH						
7	912020105008	M.PRIYADHARSHINI						
8	912020105009	S.SANJAY						
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1	912020105001	S.BOSE	S.Bose	S.Bose	S.Bose	S.Bose	S.Bose	S.Bose
2	912020105002	M.DHANAPRAKASH	M.Dh	M.Dh	M.Dh	M.Dh	M.Dh	M.Dh
3	912020105003	D.DHARINISHRI	D.Dhi	D.Dhi	D.Dhi	D.Dhi	D.Dhi	D.Dhi
4	912020105005	L.DINESHKUMAR	L.Di	L.Di	L.Di	L.Di	L.Di	L.Di
5	912020105006	P.GOBI	P.GOBI	P.GOBI	P.GOBI	P.GOBI	P.GOBI	P.GOBI
6	912020105007	P.GURUPRASATH	P.Gpr	P.Gpr	P.Gpr	P.Gpr	P.Gpr	P.Gpr
7	912020105008	M.PRIYADHARSHINI	M.Pr	M.Pr	M.Pr	M.Pr	M.Pr	M.Pr
8	912020105009	S.SANJAY	Sanjay	Sanjay	Sanjay	Sanjay	Sanjay	Sanjay
9	912020105010	B.SANTHOSHINI	B.So	B.So	B.So	B.So	B.So	B.So
10	912020105011	P.SWATHI	P.Swa	P.Swa	P.Swa	P.Swa	P.Swa	P.Swa
11	912020105012	A.THANVEER AHAMED	A.Tha	A.Tha	A.Tha	A.Tha	A.Tha	A.Tha
12	912020105301	S.AJAYSETHUPATHI	Ajay.S	Ajay.S	Ajay.S	Ajay.S	Ajay.S	Ajay.S
13	912020105302	K.MOHANASUNDARAM	K.Mo	K.Mo	K.Mo	K.Mo	K.Mo	K.Mo
14	912020105304	A.PRAGALATHAN	A.Pr	A.Pr	A.Pr	A.Pr	A.Pr	A.Pr
15	912020105305	R.SATHYA	R.Sa	R.Sa	R.Sa	R.Sa	R.Sa	R.Sa
16	912019105001	T.BABU	T.Babu	T.Babu	T.Babu	T.Babu	T.Babu	T.Babu
17	912019105002	K.DINESH	Dinesh	Dinesh	Dinesh	Dinesh	Dinesh	Dinesh
18	912019105003	J.GODSON	J.G	J.G	J.G	J.G	J.G	J.G
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23	912019105008	A.SANJEEVKUMAR	A.Sk	A.Sk	A.Sk	A.Sk	A.Sk	A.Sk
24	912019105009	S.SATHISHKUMAR	S.Sa	S.Sa	S.Sa	S.Sa	S.Sa	S.Sa
25	912019105010	R.SIVANESAN	R.S	R.S	R.S	R.S	R.S	R.S
26	912019105012	M.SRIMALAVIKA	M.Sl	M.Sl	M.Sl	M.Sl	M.Sl	M.Sl
27	912019105013	M.VALLARASU	M.Val	M.Val	M.Val	M.Val	M.Val	M.Val

Course coordinator HOD/EEE PRINCIPAL

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Pandian Saraswathi yadav Engineering College,Arasanoor -630561
Department of Electrical and Electronics Engineering

Student Attendance Sheet

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12	912020105301	S.AJAYSETHUPATHI						
13	912020105302	K.MOHANASUNDARAM						
14	912020105304	A.PRAGALATHAN						
15	912020105305	R.SATHYA						
16	912019105001	T.BABU						
17	912019105002	K.DINESH						
18	912019105003	J.GODSON						
19	912019105004	M.KAVIYARASU						
20	912019105005	MP.MADHANAGOPALAN						
21	912019105006	K.MOORTHY						
22	912019105007	M.PANTHEESWARAN						
23	912019105008	A.SANJEEVKUMAR						
24	912019105009	S.SATHISHKUMAR						
25	912019105010	R.SIVANESAN						
26	912019105012	M.SRIMALAVIKA						
27	912019105013	M.VALLARASU						

Course coordinator HOD/EEE PRINCIPAL

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Pandian Saraswathi yadav Engineering College,Arasanoor -630561
Department of Electrical and Electronics Engineering

Student Attendance Sheet

Academic Year : 2022-2023
Cource Code : VACEE2223SPVD
Course Name : Solar PV Systems Design
Duration of hours : 35
Period of Course : 06.02.2023-10.2.2023

Attendance Sheet			Date:					
Sl. No	Register Number	Student Name	09.00 am - 10.00 am	10.00 am - 11.00 am	11.15 am - 12.15pm	01.00 pm - 02.00 pm	02.00 pm - 03.15 pm	03.15 pm - 04.15 pm
1	912020105001	S.BOSE						
2	912020105002	M.DHANAPRAKASH						
3	912020105003	D.DHARINISHRI						
4	912020105005	L.DINESHKUMAR						
5	912020105006	P.GOBI						
6	912020105007	P.GURUPRASATH						
7	912020105008	M.PRIYADHARSHINI						
8	912020105009	S.SANJAY						
9	912020105010	B.SANTHOSHINI						
10	912020105011	P.SWATHI						
11	912020105012	A.THANVEER AHAMED						
12	912020105301	S.AJAYSETHUPATHI						
13	912020105302	K.MOHANASUNDARAM						
14	912020105304	A.PRAGALATHAN						
15	912020105305	R.SATHYA						
16	912019105001	T.BABU						
17	912019105002	K.DINESH						
18	912019105003	J.GODSON						
19	912019105004	M.KAVIYARASU						
20	912019105005	MP.MADHANAGOPALAN						
21	912019105006	K.MOORTHY						
22	912019105007	M.PANTHEESWARAN						
23	912019105008	A.SANJEEVKUMAR						
24	912019105009	S.SATHISHKUMAR						
25	912019105010	R.SIVANESAN						
26	912019105012	M.SRIMALAVIKA						
27	912019105013	M.VALLARASU						

Course coordinator HOD/EEE PRINCIPAL

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Pandian Saraswathi yadav Engineering College,Arasanoor -630561
Department of Electrical and Electronics Engineering
Student Attendance Sheet

Academic Year : 2022-2023
Cource Code : VACEE2223SPVD
Course Name : Solar PV Systems Design
Duration of hours : 35
Period of Course : 06.02.2023-10.2.2023

Attendance Sheet			Date:					
Sl. No	Register Number	Student Name	09.00 am - 10.00 am	10.00 am - 11.00 am	11.15 am - 12.15pm	01.00 pm - 02.00 pm	02.00 pm - 03.00 pm	03.15 pm - 04.15 pm
1	912020105001	S.BOSE						
2	912020105002	M.DHANAPRAKASH						
3	912020105003	D.DHARINISHRI						
4	912020105005	L.DINESHKUMAR						
5	912020105006	P.GOBI						
6	912020105007	P.GURUPRASATH						
7	912020105008	M.PRIYADHARSHINI						
8	912020105009	S.SANJAY						
9	912020105010	B.SANTHOSHINI						
10	912020105011	P.SWATHI						
11	912020105012	A.THANVEER AHAMED						
12	912020105301	S.AJAYSETHUPATHI						
13	912020105302	K.MOHANASUNDARAM						
14	912020105304	A.PRAGALATHAN						
15	912020105305	R.SATHYA						
16	912019105001	T.BABU						
17	912019105002	K.DINESH						
18	912019105003	J.GODSON						
19	912019105004	M.KAVIYARASU						
20	912019105005	MP.MADHANAGOPALAN						
21	912019105006	K.MOORTHY						
22	912019105007	M.PANTHEESWARAN						
23	912019105008	A.SANJEEVKUMAR						
24	912019105009	S.SATHISHKUMAR						
25	912019105010	R.SIVANESAN						
26	912019105012	M.SRIMALAVIKA						
27	912019105013	M.VALLARASU						

Course coordinator HOD/EEE PRINCIPAL

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Enrollment Student Name List

Pandian Saraswathi yadav Engineering College,Arasanoor -630561

Department of Electrical and Electronics Engineering

Student Registration Sheet

Academic Year : 2022-2023
Cource Code : VACEE2223SPVD
Course Name : Solar PV Systems Design
Duration of hours : 35
Period of Course : 06.02.2023-10.2.2023

Enrolled student list			Signature
Sl. No	Register Number	Student Name	
1	912020105001	S.BOSE	S. Bose
2	912020105002	M.DHANAPRAKASH	M. Dhana
3	912020105003	D.DHARINISHRI	D. DHARINISHRI
4	912020105005	L.DINESHKUMAR	L
5	912020105006	P.GOBI	P. GOBI
6	912020105007	P.GURUPRASATH	P. Guru
7	912020105008	M.PRIYADHARSHINI	M. Priya
8	912020105009	S.SANJAY	Sanjay. S.
9	912020105010	B.SANTHOSHINI	B. Santhoshini
10	912020105011	P.SWATHI	Swathi. P.
11	912020105012	A.THANVEER AHAMED	Ahmad.
12	912020105301	S.AJAYSETHUPATHI	S. Ajaysethupathi.
13	912020105302	K.MOHANASUNDARAM	Sekabar. K
14	912020105304	A.PRAGALATHAN	A. Pragalathan
15	912020105305	R.SATHYA	Sathya. R
16	912019105001	T.BABU	T. Babu
17	912019105002	K.DINESH	Dinesh. K
18	912019105003	J.GODSON	J. God.
19	912019105004	M.KAVIYARASU	M. Kaviyarasu.
20	912019105005	MP.MADHANAGOPALAN	Madhan. MP
21	912019105006	K.MOORTHY	K. Murthi
22	912019105007	M.PANTHEESWARAN	M. Pantheeswaran
23	912019105008	A.SANJEEVKUMAR	A. Sanjeev
24	912019105009	S.SATHISHKUMAR	S. Sathish
25	912019105010	R.SIVANESAN	R. Sivanesan.
26	912019105012	M.SRIMALAVIKA	M. Srimala
27	912019105013	M.VALLARASU	M. Vallarasu

Course coordinator **HOD/EEE** **PRINCIPAL**

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MODEL CERTIFICATES

PANDIAN SARASWATHI YADAV ENGINEERING COLLEGE

Approved by AICTE & Affiated to Anna University, Chennai.
Arasanoor, Thirumansolai Post, Sivagangai – Madurai Highway, Tamilnadu - 630 561

Value added course on

SOLAR PV SYSTEMS DESIGN

Organized by

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

CERTIFICATE

This is Certify that K.DHINESH From **Third/Final year EEE** has participated in the value-added course on **Solar PV Systems Design** organized by the Department of Electrical And Electronics Engineering From 6.02.2023 to 10.02.2023 (35 Hours) at Pandian Saraswathi Yadav Engineering College, Sivagangai.

Mrs.S.Pandimeena
AP/EEE
Head of the Department

Dr.R.RAJA
Principal

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PANDIAN SARASWATHI YADAV ENGINEERING COLLEGE

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Arasanoor, Thirumansolai Post, Sivagangai – Madurai Highway, Tamilnadu - 630 561

Value added course on

SOLAR PV SYSTEMS DESIGN

Organized by

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

CERTIFICATE

This is Certify that ..... J. GODSON ..... From **Third/Final year EEE** has participated in the value-added course on **Solar PV Systems Design** organized by the Department of Electrical And Electronics Engineering From 6.02.2023 to 10.02.2023 (35 Hours) at Pandian Saraswathi Yadav Engineering College, Sivagangai.

Mrs.S.Randimeena
AP/EEE
Head of the Department

Dr.R.RAJA
Principal

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