



Indra Ganesan

COLLEGE OF ENGINEERING

Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai
Accredited by NAAC with 'B+' Grade, 2(f) & 12B Status Institution by UGC

IG Valley, Madurai Main Road, Manikandam, Tiruchirappalli - 620012

NAAC DOCUMENTS

QUALITY INDICATOR FRAME WORK

CRITERION – 1

CURRICULAR ASPECTS

SUBMITTED BY

IQAC

INTERNAL QUALITY ASSURANCE CELL

INDRA GANESAN COLLEGE OF ENGINEERING





DEPARTMENT OF ELECTRICAL AND ELECTRIC ENGINEERING

ACADEMIC YEAR 2020-2021 / EVEN SEMESTER

1.2 Academic Flexibility (30)

1.2.1 Number of Certificate/Value added courses offered and online courses of MOOCs, SWAYAM, NPTEL etc. (where the students of the institution have enrolled and successfully completed during the last five years)

AND

1.2.2 Percentage of students enrolled in Certificate/ Value added courses and also completed online courses of MOOCs, SWAYAM, NPTEL etc. as against the total number of students during the last five years

VAC Title:	SOLAR PHOTOVOLTAIC SYSTEM DESIGN				
Resource Person:	S.SRIDHAR, Trainer, Micro win Automation, Trichy-621216				
Date of conduct from:	09.08.2021	To:	13.08.2021	Duration:	30 Hours
Organized Department:	ELECTRICAL AND ELECTRIC ENGINEERING				
Participant Year:	EEE- IV, III, II	Semester:	EVEN	No. of Students Registered:	46
Venue:	GOOGLE MEET				

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Department of Electrical and Electronics Engineering
Academic Year 2020-2021 –Even Semester

04.08.2021

DEPARTMENT CIRCULAR

Department of Electrical and Electronics Engineering and IQAC of IGCE in association with Micro win Automation is going to organize Value Added Course for all Second, Third and Final year students on “Solar Photovoltaic System Design” from 09.08.2021 to 13.08.2021. Certificates will be issued to the eligible participants at the end of the Course. This training will be conducted through online mode.

Resource Person Detail	1. S.Sridhar, Trainer, Micro win Automation, Trichy-621216
Online Mode	Google Meet

Gr. Ma lathi
HOD/EEE

[Signature]
Principal

Cc:

- Principal Table
- IQAC Co-Ordinator
- Class In charges - II, III & IV-Year
- II, III & IV-Year EEE Students
- Office File
- Notice Board

[Signature]
Dr. G. Balakrishnan, M.E., Ph.D.,
Principal
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IG Valley, Madurai Main Road
Manikandam, Trichy-620 012.



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Value Added Course

"Solar Photo Voltaic System Design"

SYLLABUS

S.NO	TOPIC COVERED	DURATION (in hours)	DATE
1	The PV Cell	3	09.08.2021
2	Series And Parallel Interconnection	3	09.08.2021
3	Energy From Sun	3	10.08.2021
4	Incident Energy Estimation	3	10.08.2021
5	Sizing PV	3	11.08.2021
6	Maximum Power Point Tracking	3	11.08.2021
7	MPPT Algorithms	3	12.08.2021
8	PV-Battery Interfaces	3	12.08.2021
9	Peltier Cooling PV And Water Pumping	3	13.08.2021
10	PV-Grid Interface-I, Life Cycle Costing	3	13.08.2021
11	Exam	1	13.08.2021
Total Hours (Excluding test)		30	-

Jehy Jeyaraj
VAC Coordinator

Gr. Ma batthi
HOD/EEE

[Signature]
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Value Added Course

“Solar Photo Voltaic System Design”

STUDENTS PARTICIPATION LIST

Dr. G. Balakrishnan, M.E., Ph.D.,
Principal
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012.

S.NO	Register Number	Name
1	811217105005	ARUL JOY ASHA A
2	811217105006	ARUN SEBASTIN P
3	811217105007	BHARTHASARATHI M
4	811217105008	CHITHRA P
5	811217105009	DEEPIKA G
6	811217105010	EZHUMALAI A
7	811217105011	GAYATHRI K
8	811217105012	GAYATHRI S
9	811217105013	KANIMOZHI S
10	811217105014	KEERTHANA S
11	811217105015	KUMARIVALLI T
12	811217105016	MADHUMITHA S
13	811217105017	MANO K
14	811217105018	MEKALA M
15	811217105020	PAVITHRA S
16	811217105021	PRAVEEN RAJ R
17	811217105022	RAJASEKARN V
18	811217105023	REVATHI P
19	811217105024	RISHON GURU M
20	811217105026	SANTHOSH K
21	811217105027	SRIKUMAR M S



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r. G. Balakrishnan, M.E., Ph.D.
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S.NO	Register Number	Name
22	811217105028	SRI LOGESH C
23	811217105029	SUBHA T
24	811217105031	VALARMATHI C
25	811217105032	VISWANATH R
26	811217105301	SANJEEV KUMAR R
27	811218105001	ARUN PRAVEEN RAJ A
28	811218105002	HARIHARAN M
29	811218105003	INBARAJ A
30	811218105004	JEYA STEPHEN S
31	811218105005	MANIKANDAN N
32	811218105006	PADMANABAN A
33	811218105007	SASIKUMAR R
34	811218105008	SIVAKUMAR P
35	811218105009	VEERA RAGAVAN A
36	811218105010	YUVARAJ S
37	811219105002	M.BARATH
38	811219105003	A.MANIKANDAN
39	811219105005	C.PONNALAGU
40	811219105006	A.SALAMON
41	811219105007	M.SARAVANAKUMAR
42	811219105008	K.SOLAIMATHI
43	813919105001	P.DHEVENTHIRAN
44	811219105301	A. VENKATRAMAN

(Signature)
NAC Coordinator

(Signature)
HOD/EEE



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Department of Electrical and Electronics Engineering

Academic Year 2020-2021 – Even Semester

STUDENTS ATTENDANCE LIST

“Solar Photo Voltaic System Design”

Dr. G. Balakrishnan, M.E., Ph.D.,
Principal

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S.NO	Register Number	Name	YEAR/ BRANCH	09.08.2021		10.08.2021		11.08.2021		12.08.2021		13.08.2021		NO OF SESSIONS ATTENDED	SIGNATURE OF THE STUDENT
				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN		
1	811217105005	ARUL JOY ASHA A	IV/EEE	P	P	P	P	P	P	P	P	P	P	10	ONLINE
2	811217105006	ARUN SEBASTIN P	IV/EEE	P	P	P	P	P	P	P	P	P	P	10	
3	811217105007	BHARTHASARATHI M	IV/EEE	P	P	P	P	P	A	P	P	P	P	9	
4	811217105008	CHITHRA P	IV/EEE	P	P	P	A	P	P	P	P	P	P	9	
5	811217105009	DEEPIKA G	IV/EEE	P	P	P	P	P	P	A	P	P	P	9	
6	811217105010	EZHUMALAI A	IV/EEE	P	P	P	P	P	P	P	P	P	P	10	
7	811217105011	GAYATHRI K	IV/EEE	P	P	P	P	P	P	P	P	P	P	9	
8	811217105012	GAYATHRI S	IV/EEE	P	P	P	P	P	A	P	P	P	P	9	
9	811217105013	KANIMOZHI S	IV/EEE	P	P	P	P	P	P	P	A	P	P	9	
10	811217105014	KEERTHANA S	IV/EEE	P	P	P	P	P	P	P	P	P	P	10	
11	811217105015	KUMARIVALLI T	IV/EEE	P	P	P	P	P	P	P	P	P	P	9	
12	811217105016	MADHUMITHA S	IV/EEE	P	P	A	P	P	P	P	P	P	P	10	
13	811217105017	MANO K	IV/EEE	P	P	P	P	P	P	P	P	P	P	10	
14	811217105018	MEKALA M	IV/EEE	P	P	P	P	P	P	P	P	P	P	10	
15	811217105020	PAVITHRA S	IV/EEE	P	P	P	P	P	A	P	P	P	P	9	

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				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN		
16	811217105021	PRAVEEN RAJ R	IV/EEE	P	A	P	P	P	A	P	P	P	P	8	ONLINE
17	811217105022	RAJASEKAR.N V	IV/EEE	P	P	P	A	P	P	P	A	P	P	8	
18	811217105023	REVATHI P	IV/EEE	P	P	P	P	P	A	P	P	P	P	9	
19	811217105024	RISHON GURU M	IV/EEE	P	P	P	P	P	A	P	P	P	P	9	
20	811217105026	SANTHOSH K	IV/EEE	P	P	P	P	P	P	P	P	P	P	10	
21	811217105027	SRIKUMAR M S	IV/EEE	P	P	P	P	A	P	P	A	P	P	8	
22	811217105028	SRI LOGESH C	IV/EEE	P	P	P	P	P	A	P	P	P	P	9	
23	811217105029	SUBHA T	IV/EEE	P	P	P	P	P	P	P	P	P	P	10	
24	811217105031	VALARMATHI C	IV/EEE	P	P	P	P	P	P	P	P	P	P	10	
25	811217105032	VISWANATH R	IV/EEE	P	P	P	P	P	P	P	P	P	P	10	
26	811217105301	SANJEEV KUMAR R	IV/EEE	P	P	P	P	P	P	P	P	P	P	10	
27	811218105001	ARUN PRAVEEN RAJ A	III/EEE	P	P	P	P	P	P	P	A	P	P	9	
28	811218105002	HARIHARAN M	III/EEE	P	P	P	P	P	A	P	P	P	P	9	
29	811218105003	INBARAJ A	III/EEE	P	P	P	P	A	P	P	P	P	P	9	
30	811218105004	JEYA STEPHEN S	III/EEE	P	P	P	A	P	P	P	P	P	P	10	
31	811218105005	MANIKANDAN N	III/EEE	P	P	P	P	P	P	P	P	P	P	9	
32	811218105006	PADMANABAN A	III/EEE	P	P	P	P	P	P	P	A	P	P	9	
33	811218105007	SASIKUMAR R	III/EEE	P	P	P	P	A	P	P	A	P	P	8	
34	811218105008	SIVAKUMAR P	III/EEE	P	P	P	P	P	P	A	P	P	P	9	
35	811218105009	VEERA RAGAVAN A	III/EEE	P	P	P	P	P	P	P	P	P	P	10	
36	811218105010	YUVARAJ S	III/EEE	P	P	P	P	P	A	P	P	P	P	9	



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				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN		
37	811219105002	M.BARATH	II/EEE	P	P	P	P	P	P	P	P	P	P	10	ONLINE
38	811219105003	A.MANIKANDAN	II/EEE	P	P	P	P	P	P	P	P	P	P	10	
39	811219105005	C.PONNALAGU	II/EEE	P	P	P	P	P	P	P	P	P	P	10	
40	811219105006	A.SALAMON	II/EEE	P	P	P	P	P	P	P	A	P	P	9	
41	811219105007	M.SARAVANAKUMAR	II/EEE	P	A	P	P	P	A	P	P	P	P	8	
42	811219105008	K.SOLAIMATHI	II/EEE	P	P	P	P	P	P	P	A	P	P	9	
43	813919105001	P.DHEVENTHIRAN	II/EEE	P	P	P	P	P	P	P	P	P	P	10	
44	811219105301	A. VENKATRAMAN	II/EEE	P	P	P	P	P	A	P	P	P	P	9	

Dehy Jeefer
VAC Coordinator

10/8/21
Dr. G. Balakrishnan, M.E., Ph.D.,
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Gr. Ma lathi
HoD/EEE



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Name of the Student:

Year/Sem:

AU Register Number:

Value Added Course

“Solar Photovoltaic System Design”

MULTIPLE CHOICE QUESTIONS (25X1 = 25 Marks)

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 d) Solar eye
4. Full form of FF in the solar field is _____
a) Form factor b) Fill factor c) Face factor d) Fire factor
5. Calculate Fill factor using the data: $P_{max}=15$ W, $V_{oc}=18$ V, $I_{sc}=4$ A.
a) .65 b) .59 c) .20 d) .98
6. Material used for making solar cell is _____
a) Silicon b) Carbon c) Sodium d) Magnesium
7. The term photo voltaic comes from _____
a) Spanish b) Greek c) German d) English
8. A typical output of a solar cell is
a) 0.1 V b) 0.26 V c) 1.1 V d) 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) Series and parallel arrangement of solar cells.
b) Parallel arrangement of solar cells.
c) None of the above.


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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.....
a) Solar Energy into Electricity b) Solar Energy radiation
b) c). Solar Energy thermal energy d) Solar Energy mechanical energy
13. What is the rate of solar energy reaching the earth surface?
a) 1016 b) 865W c) 2854W d) 1912W
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
15. The process of converting light (photons) to electricity (voltage) is called:
a) PV effect. b) Solar cell. c) Radiation.
- 16....converts sunlight directly into solar power (electricity).
a) Battery. b) Solar cell. c) Inverter.
17. The most expensive type of the solar cells is:
a) Amorphous. b) Polycrystalline. c) Monocrystalline.
18. Which type of solar cells has highest efficiency?
a) Amorphous. b) Polycrystalline. c) Monocrystalline.
19. 5-Which type of solar cells is more efficient in low lights:
a) Amorphous. b) Polycrystalline. c) Monocrystalline.
20. All the electricity produced by the solar panels is produced as:
a) AC b) DC c) both DC and AC.
21. The device which converts the DC to AC is:
a) Transformer. b) Relay. c) Inverter.
22. Interactive PV systems operate:
a) Stand alone. b) In parallel with the grid. c) None.


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23. The initial cost of PV systems is:

a) Low. b) Medium. c) High.

24. Energy production from PV systems depends on:

a) Location. b) Weather. c) Both a and b

25. The running cost of PV systems is:

a) High. b) Low. c) Medium.

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Value Added Course

“Solar Photovoltaic System Design”

ANSWER KEY

1	a	6	a	11	b	16	b	21	c
2	a	7	b	12	c	17	c	22	b
3	a	8	b	13	a	18	c	23	c
4	b	9	b	14	a	19	a	24	c
5	c	10	c	15	a	20	b	25	b

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VAC Coordinator

13.08.21

P. Dheventhiran

813919105001

II year / 04 sem

Solar Photovoltaic System Design

- 1) a) Electrical Energy
- 2) a) True
- 3) a) Solar array
- 4) b) Fill factor
- 5) c) 20
- 6) a) Silicon
- 7) b) Good
- 8) c) 1.1k
- 9) b) 10 to 15%
- 10) c) Series and Parallel arrangement solar cells
- 11) b) 40-50 mA/cm²
- 12) c) Solar energy thermal energy
- 13) a) 1016
- 14) b) 9.2×10^{24} J/year
- 15) a) PV effect
- 16) b) Solar cell
- 17) e) Monocrystalline
- 18) b) Polycrystalline
- 19) a) Amorphous
- 20) b) DC
- 21) e) Inverters
- 22) b) In parallel with grid
- 23) c) High
- 24) a) Location
- 25) b) Low

21

25

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13-08-2021

Gayathri . K

811217105011

Solar photovoltaic system Design

IV - year EEE / 1st sem

1 (a) Electrical energy

2 (a) ~~True~~

3 (a) Solar array

4 (b) Fill factor

5 (c) ~~20~~

6 (a) Silicon

7 (b) ~~Crystalline~~

8 (c) ~~1.1~~

9 (b) 10 to 15%

10 (c) Series and parallel arrangement of solar cells

11 (b) 40-50 mA/cm^2

12 (c) solar energy thermal energy

13 (a) 10%

14 (b) ~~9.2×10^{21}~~ / year

15 (a) PV effect

16 (b) Solar cell

17 (c) Monocrystalline

18 (b) polycrystalline

19 (a) Amorphous

20 (b) ~~PC~~

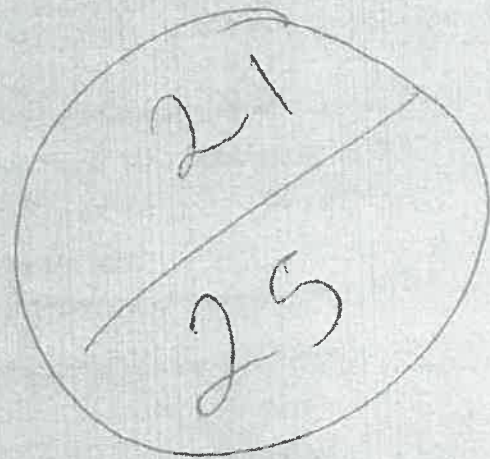
21 (c) Inverter

22 (b) In parallel with the grid

23 (c) High

24 (a) Location

25 (b) Low



~~100~~

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13.08.21

P. Sivakumar

811218105008

III year / 06 sem

Solar Photovoltaic System Design

1. (a) Electrical energy
2. (a) True
3. (a) Solar array
4. (b) Fill factor
5. (c) .20
6. (a) Silicon
7. (b) Greek
8. (c) 1.1
9. (b) 10 to 15V
10. (c) Series and parallel arrangement of solar cells
11. (b) 40-50 mA/cm²
12. (c) Solar Energy thermal energy
13. (a) 1016
14. (b) 9.2×10^{24} J/year
15. (a) PV effect
16. (b) Solar cell
17. (c) Monocrystalline
18. (b) Polycrystalline
19. (a) Amorphous
20. (b) DC
21. (c) Inverter
22. (b) In parallel with the grid
23. (c) High
24. (a) located
25. (b) low

21
25



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Department of Electrical and Electronics Engineering

Academic Year 2020-2021 – Even Semester

VALUE ADDED COURSE ASSESSMENT SHEET

“Solar Photo Voltaic System Design”

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Principal

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S.NO	Register Number	Name	YEAR/ BRANCH	Attendance Details		VAC-MCQ TEST		OVERALL MARK (100) (50% of A + 50% of B)
				No. of Hours Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	
1	811217105005	ARUL JOY ASHA A	IV/EEE	30	100	20	80	90
2	811217105006	ARUN SEBASTIN P	IV/EEE	30	100	19	76	88
3	811217105007	BHARTHASARATHI M	IV/EEE	27	90	19	76	83
4	811217105008	CHITHRA P	IV/EEE	27	90	21	84	87
5	811217105009	DEEPIKA G	IV/EEE	27	90	19	76	83
6	811217105010	EZHUMALAI A	IV/EEE	27	90	19	76	83
7	811217105011	GAYATHRI K	IV/EEE	30	100	20	80	90
8	811217105012	GAYATHRI S	IV/EEE	27	90	21	84	87
9	811217105013	KANIMOZHI S	IV/EEE	27	90	19	76	83
10	811217105014	KEERTHANA S	IV/EEE	27	90	19	76	83
11	811217105015	KUMARIVALLI T	IV/EEE	30	100	21	84	92
12	811217105016	MADHUMITHA S	IV/EEE	27	90	20	80	85
13	811217105017	MANO K	IV/EEE	30	100	21	84	92

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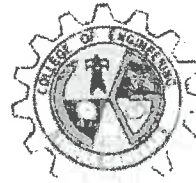
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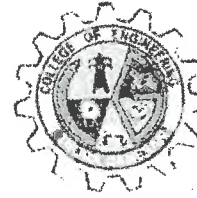
S.NO	Register Number	Name	YEAR/ BRANCH	Attendance Details		VAC-MCQ TEST		OVERALL MARK (100) (50% of A + 50% of B)
				No. of Hours Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	
14	811217105018	MEKALA M	IV/EEE	30	100	20	80	90
15	811217105020	PAVITHRA S	IV/EEE	27	90	19	76	83
16	811217105021	PRAVEEN RAJ R	IV/EEE	24	80	20	80	80
17	811217105022	RAJASEKAR.N V	IV/EEE	24	80	21	84	82
18	811217105023	REVATHI P	IV/EEE	27	90	22	88	89
19	811217105024	RISHON GURU M	IV/EEE	30	100	20	80	90
20	811217105026	SANTHOSH K	IV/EEE	27	90	21	84	87
21	811217105027	SRIKUMAR M S	IV/EEE	24	80	20	80	80
22	811217105028	SRI LOGESH C	IV/EEE	27	90	21	84	87
23	811217105029	SUBHA T	IV/EEE	30	100	20	80	90
24	811217105031	VALARMATHI C	IV/EEE	30	100	21	84	92
25	811217105032	VISWANATH R	IV/EEE	30	100	19	76	88
26	811217105301	SANJEEV KUMAR R	IV/EEE	30	100	21	84	92
27	811218105001	ARUN PRAVEEN RAJ A	III/EEE	27	90	20	80	85
28	811218105002	HARIHARAN M	III/EEE	27	90	19	76	83
29	811218105003	INBARAJ A	III/EEE	27	90	19	76	83
30	811218105004	JEYA STEPHEN S	III/EEE	27	90	20	80	85
31	811218105005	MANIKANDAN N	III/EEE	30	100	21	84	92
32	811218105006	PADMANABAN A	III/EEE	27	90	19	76	83



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S.NO	Register Number	Name	YEAR/ BRANCH	Attendance Details		VAC-MCQ TEST		OVERALL MARK (100) (50% of A + 50% of B)
				No. of Hours Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	
33	811218105007	SASIKUMAR R	III/EEE	24	80	21	84	82
34	811218105008	SIVAKUMAR P	III/EEE	27	90	20	80	85
35	811218105009	VEERA RAGAVAN A	III/EEE	30	100	21	84	92
36	811218105010	YUVARAJ S	III/EEE	27	90	20	80	85
37	811219105002	M.BARATH	II/EEE	30	100	19	76	88
38	811219105003	A.MANIKANDAN	II/EEE	30	100	20	80	90
39	811219105005	C.PONNALAGU	II/EEE	30	100	21	84	92
40	811219105006	A.SALAMON	II/EEE	27	90	21	84	87
41	811219105007	M.SARAVANAKUMAR	II/EEE	24	80	20	80	80
42	811219105008	K.SOLAIMATHI	II/EEE	27	90	21	84	87
43	813919105001	P.DHEVENTHIRAN	II/EEE	30	100	20	80	80
44	811219105301	A. VENKATRAMAN	II/EEE	27	90	19	76	83


VAC Coordinator


Dr. G. Balakrishnan, M.E., Ph.D.,
Principal

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Report on Value Added Course

Title:	"Solar Photo Voltaic System Design"				
Resource Persons:	S.Sridhar, Trainer, Micro win Automation, Trichy-621216				
Date of conduct from :	09.08.2021	To:	13.08.2021	Duration:	30 Hours
Organized Department :	Electrical and Electronics Engineering				
Participant Year:	2,3,4	No. of Students Registered :	44		
Venue:	online mode Google Meet: meet.google.com/333-5625-245				

Outcome of Value Added Course (VAC): At the end of the Course, Students can able to

1. Develop a comprehensive technological understanding in solar PV system components.
2. Develop understanding on the PV plant design and select suitable technologies.
3. Design and simulate a PV power plant using software tool.
4. Plan project implementation, operation and maintenance.
5. Carry out techno-economic-environmental performance evaluation of a solar PV power plant

Assessment Process

- Students, who are securing more than 70% on total score and secured more than 75% in attendance is eligible to receive the certificate for the VAC course conducted
- Total Score = $(0.5 * \text{Attendance in VAC out of 100 percentage} + 0.5 * \text{Test mark in VAC out of 100 marks})$


VAC Coordinator


HOD/EEE


Principal

Dr. G. Balakrishnan, M.E., Ph.D.,

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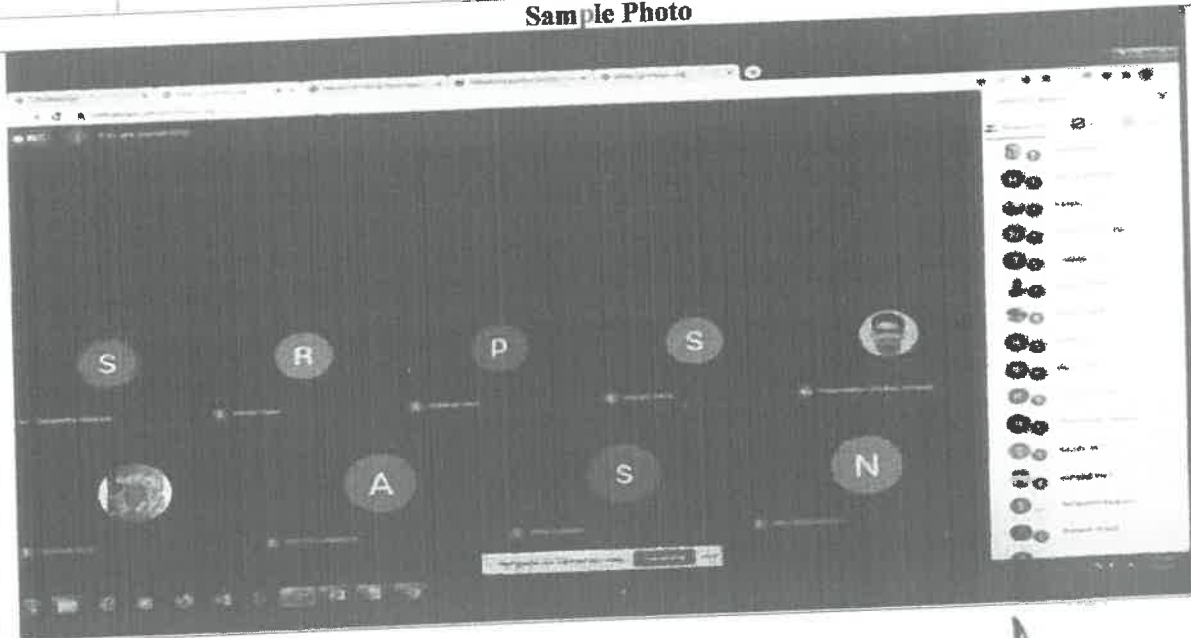
Principal

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IG Valley, Madurai Main Road
Manikandam, Trichy-620 012.

Sample Photo of Value Added Course

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Resource Persons:	S.Sridhar, Trainer, Micro win Automation, Trichy-621216				
Date of conduct from :	09.08.2021	To:	13.08.2021	Duration:	30 Hours
Organized Department :	Electrical and Electronics Engineering				
Participant Year:	2,3,4	No. of Students Registered :	44		
Venue:	online mode Google Meet: meet.google.com/333-5625-245				

Sample Photo



Devy Jeyaraj
VAC Coordinator

Gr. Ma lathi
HOD/EEE

[Signature]
Principal




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CERTIFICATE OF PARTICIPATION

This is to certify that Ms. DEEPIKA G, IV Year, EEE has successfully completed the Value Added Course on “**Solar Photovoltaic System Design**” organized by Department of Electrical & Electronics Engineering and IQAC of our Institution in Association with Micro win Automation, from 9th August 2021 to 13th August 2021 (5days) during the Academic year 2020-2021.


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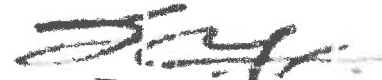


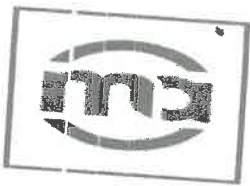
CERTIFICATE OF PARTICIPATION

This is to certify that Mr.MANO K, IV Year, EEE has successfully completed the Value Added Course on “**Solar Photovoltaic System Design**” organized by Department of Electrical & Electronics Engineering and IQAC of our Institution in Association with Micro win Automation, from 9th August 2021 to 13th August 2021 (5days) during the Academic year 2020-2021.


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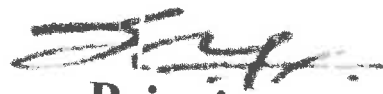


CERTIFICATE OF PARTICIPATION

This is to certify that Mr. SANTHOSH K, IV Year, EEE has successfully completed the Value Added Course on “Solar Photovoltaic System Design” organized by Department of Electrical & Electronics Engineering and IQAC of our Institution in Association with Micro win Automation, from 9th August 2021 to 13th August 2021 (5days) during the Academic year 2020-2021.


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CERTIFICATE OF PARTICIPATION

This is to certify that Ms.CHITHRA P, IV Year, EEE has successfully completed the Value Added Course on “**Solar Photovoltaic System Design**” organized by Department of Electrical & Electronics Engineering and IQAC of our Institution in Association with Micro win Automation, from 9th August 2021 to 13th August 2021 (5days) during the Academic year 2020-2021.


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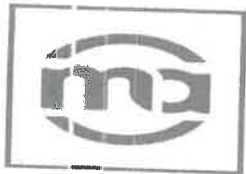
CERTIFICATE OF PARTICIPATION

This is to certify that Ms.PAVITHRA S, IV Year, EEE has successfully completed the Value Added Course on “**Solar Photovoltaic System Design**” organized by Department of Electrical & Electronics Engineering and IQAC of our Institution in Association with Micro win Automation, from 9th August 2021 to 13th August 2021 (5days) during the Academic year 2020-2021.


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CERTIFICATE OF PARTICIPATION

This is to certify that Ms.REVATHI P, IV Year, EEE has successfully completed the Value Added Course on “**Solar Photovoltaic System Design**” organized by Department of Electrical & Electronics Engineering and IQAC of our Institution in Association with Micro win Automation, from 9th August 2021 to 13th August 2021 (5days) during the Academic year 2020-2021.


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CERTIFICATE OF PARTICIPATION

This is to certify that Mr. ARUN PRAVEEN RAJ A, III Year, EEE has successfully completed the Value Added Course on “**Solar Photovoltaic System Design**” organized by Department of Electrical & Electronics Engineering and IQAC of our Institution in Association with Micro win Automation, from 9th August 2021 to 13th August 2021 (5days) during the Academic year 2020-2021.


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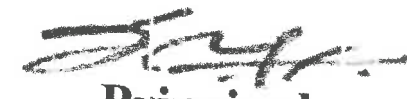


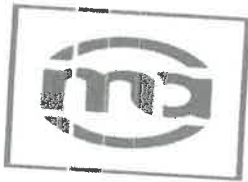
CERTIFICATE OF PARTICIPATION

This is to certify that Mr. HARIHARAN M, III Year, EEE has successfully completed the Value Added Course on “**Solar Photovoltaic System Design**” organized by Department of Electrical & Electronics Engineering and IQAC of our Institution in Association with Micro win Automation, from 9th August 2021 to 13th August 2021 (5days) during the Academic year 2020-2021.


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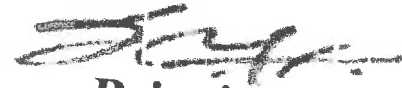


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This is to certify that Mr. JEYA STEPHEN S, III Year, EEE has successfully completed the Value Added Course on “**Solar Photovoltaic System Design**” organized by Department of Electrical & Electronics Engineering and IQAC of our Institution in Association with Micro win Automation, from 9th August 2021 to 13th August 2021 (5days) during the Academic year 2020-2021.


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This is to certify that Mr. PADMANABAN A, III Year, EEE has successfully completed the Value Added Course on “Solar Photovoltaic System Design” organized by Department of Electrical & Electronics Engineering and IQAC of our Institution in Association with Micro win Automation, from 9th August 2021 to 13th August 2021 (5days) during the Academic year 2020-2021.


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This is to certify that Mr. INBARAJ A, III Year, EEE has successfully completed the Value Added Course on “Solar Photovoltaic System Design” organized by Department of Electrical & Electronics Engineering and IQAC of our Institution in Association with Micro win Automation, from 9th August 2021 to 13th August 2021 (5days) during the Academic year 2020-2021.


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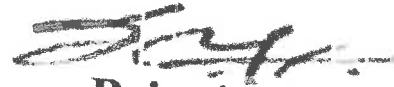


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This is to certify that Mr. VEERA RAGAVAN A, III Year, EEE has successfully completed the Value Added Course on “Solar Photovoltaic System Design” organized by Department of Electrical & Electronics Engineering and IQAC of our Institution in Association with Micro win Automation, from 9th August 2021 to 13th August 2021 (5days) during the Academic year 2020-2021.


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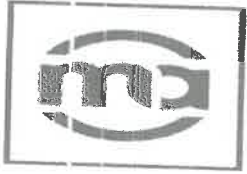
This is to certify that Mr. P.DHEVENTHIRAN, II Year, EEE has successfully completed the Value Added Course on “**Solar Photovoltaic System Design**” organized by Department of Electrical & Electronics Engineering and IQAC of our Institution in Association with Micro win Automation, from 9th August 2021 to 13th August 2021 (5days) during the Academic year 2020-2021.


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This is to certify that Ms. C.PONNALAGU, II Year, EEE has successfully completed the Value Added Course on “**Solar Photovoltaic System Design**” organized by Department of Electrical & Electronics Engineering and IQAC of our Institution in Association with Micro win Automation, from 9th August 2021 to 13th August 2021 (5days) during the Academic year 2020-2021.


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This is to certify that Mr. M.SARAVANAKUMAR, II Year, EEE has successfully completed the Value Added Course on “**Solar Photovoltaic System Design**” organized by Department of Electrical & Electronics Engineering and IQAC of our Institution in Association with Micro win Automation, from 9th August 2021 to 13th August 2021 (5days) during the Academic year 2020-2021.


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Mr.C.Syam Kumar
Chief Executive Officer.


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This is to certify that Mr. A. VENKATRAMAN, II Year, EEE has successfully completed the Value Added Course on “Solar Photovoltaic System Design” organized by Department of Electrical & Electronics Engineering and IQAC of our Institution in Association with Micro win Automation, from 9th August 2021 to 13th August 2021 (5days) during the Academic year 2020-2021.

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Mr. C. Syam Kumar

Chief Executive Officer.

Dr. G. Balakrishnan, M.E., Ph.D.,

Principal

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This is to certify that Mr. M.BARATH, II Year, EEE has successfully completed the Value Added Course on “**Solar Photovoltaic System Design**” organized by Department of Electrical & Electronics Engineering and IQAC of our Institution in Association with Micro win Automation, from 9th August 2021 to 13th August 2021 (5days) during the Academic year 2020-2021.


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CERTIFICATE OF PARTICIPATION

This is to certify that Ms. K.SOLAIMATHI, II Year, EEE has successfully completed the Value Added Course on “**Solar Photovoltaic System Design**” organized by Department of Electrical & Electronics Engineering and IQAC of our Institution in Association with Micro win Automation, from 9th August 2021 to 13th August 2021 (5days) during the Academic year 2020-2021.


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Mr.C.Syam Kumar
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