S. I. C. E. Society's Degree College of Arts, Science and Commerce Ambernath Permanently Affiliated to University of Mumbai NAAC Accredited B\* Department of Physics Academic Year 2023-24

Date: 13th July 2023

To. The Principal SICES DEGREE COLLEGE AMBERNATH

Subject: Commencement of Certificate course.

Respected Madam,

In this academic year the Department of Physicsplanned to conduct a Certificate Course on "SOLAR TECHNOLOGY AS A GREEN ENERGY SOLUTION". From this course students will be acquainted with the knowledge of renewable energy source. As a renewable source of power solar energy also has an important role in reducing greenhouse gas emissions and mitigating climate change.

This course will be beneficial to our college grading from NAAC point of view kindly give us permission for conducting the above-mentioned certificate course. The detail structure of certificate course is enclosed here.

Thanking you,

Sincerely,

Dr. Digamber M. Sapkal

Head

HEAD DEPARTMENT OF PHYSICS MICES DEGREE COLLEGE OF WATS, SCIENCE & CO. FIE Janbhul Phata, Ambernata (11)

# S.I.C.E. Society's College of Arts, Science and Commerce, Ambarnath (W.) Department of Physics Certificate Course - Solar Technology as Green Energy solutions (30 Hrs)

#### INDEX

Sr.	Chanten	No. of
No.	Chapter	Lectures
No.		(30)
1	Sun: The Ultimate Source of Energy	2
2	Story of Solar Energy & Sun's Radiation Analysis	2
3	Solar Cell	2
4	Electricity Basics	2
5	Solar PV System	2
6	Solar PV Batteries	2
7	Tilt of Panels	2
8	Mounting Solar Panels	2
9	Installation of PV System	2
10	Examination	2
11	hands on Training	5
12	Industrial Visit	5

MEAD DEPARTMENT OF PHYSICS
SICES DEGREE COLLEGE OF ARTS, SCIENCE & COMMERCE
Jambhul Phata, Ambernath (W)



# South Indian Children's Education Society's Degree College of Arts, Science and Commerce

Jambhul Phata, Ambarnath - Badlapur Road, Ambarnath (west), 421505

Accredited by NAAC with B+ Grade

Permanently Affiliated to University of Mumbal.

Academic Year 2023-24

CERTIFICATE CC	JURSE APPLICATION FORM
1. Full Name Name (Firs	st Name) (Middle Name) (Surname)
2. Department Science	
3. Roll number f5 23 001	Date of Birth 04/01/2004. Age approx 19
4. Gender Male	
5. Religion Hindu	Category
6. Permanent Address Flat	L no. 302 jupitar Heights behind.
Gurudev Hotel	katrap, badla Pux past 421503.
7. WhatsApp/Contact No: 87	767823330. E-mail Id noreshmali 704970, comoj/16.
I hereby certify that, the inform	mation given in this application is complete and correct. I a ulations of the SICES Degree College.
Place: Date:	Signature of the Applicant
	For Office Use only
Application No	Date Received 16/08/2023
Total Course Fee: 300/-	Fee paid receipt no. 372.
Verification (Clerk)	
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## South Indian Children's Education Society's Degree College of Arts, Science and Commerce

Jambhul Phata, Ambarnath - Badlapur Road, Ambarnath (west), 421505

Accredited by NAAC with B+ Grade

Permanently Affiliated to University of Mumbai

Academic Year 2023-24
CERTIFICATE COURSE APPLICATION FORM
1. Full Name DARSHANA VINOD MOKAL (In capital) (First Name) (Middle Name) (Surname)
2. Department Physics Class FYBsc.
3. Roll number 23009 .Date of Birth 08 02 2000 Age 23 You.
4. Gender Female.
5. Religion Hindu . Category S.T.
6. Permanent Address BOO1, Umiya Darshan Opp Deep Aangan Society, Valivali Badlapro
7. WhatsApp/Contact No 9004749437 E-mail Iddarshna Mokel 45@ growil. com
8. Name of the Certificate Course Solar Technology As Green Soulution
I hereby certify that, the information given in this application is complete and correct. I agree to comply with the rules and regulations of the SICES Degree College.
Place: Badlapus Date: Signature of the Applicant
For Office Use only
Application No. 02. Date Received 16/08/2.3
Total Course Fee: 300/ Fee paid receipt no. 37-3.
Verification (Clerk)

Head of the Department

Principal

# South Indian Children's Education Society's Degree College of Arts, Science and Commerce Jambhul Phata, Ambarnath - Badlapur Road, Ambarnath (west), 421505 Accredited by NAAC with B+ Grade

Permanently Affiliated to University of Mumbai

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### Academic Year 2023-24 TIFICATE COURSE REGISTERATION DETAILS

DEPARTMENT OF PHYSICS

ME: SOLAR TECHNOLOGY AS GREEN ENERGY SOLUTION

SR. NO.	NAME OF THE STUDENTS	CLASS	ROLL NO.	WHAT'S APP NO.	FEES RECEIP T NO.	Remark
1	ASHVINIBEN SAMADHAN PATIL	FYBSc	FS 23013	7666889436	401	Paid
2	SAMIKSHA SHANTARAM BAGUL	FYBSc	FS 23020	7218762213	402	Paid
3	JANVI ANIL CHAVAN	FYBSc	FS23011	9699193570	403	Paid
4	ELISHA PRAKASH AASADE	FYBSc	FS23004	8459070013	404	Paid
5	KASHISH AFROZ AZMI	FYBSc	FS23007	7798422040	405	Paid
6	DARSHANA VINOD MOKAL	FYBSc	FS23009	9004749437	406	Paid
7	VEDANTI SHAILENDRA GAIKWAD	FYBSc	FS23029	9309493191	407	Paid
8	NARESH KANTIBHAI MALI	FYBSc	FS23001	8767323330	408	Paid
9	AKSHDA BHAGVAN WALIMBE	FYBSc	FS23033	8378877491	409	Paid
10	DASHARATH HARIBA CHLEKAR	FYBSc	FS23010	9322102825	410	Paid
11	SUJIT RAVINDRA JADHAV	FYBSc	FS23025	8767922970	411	Paid
12	DIKSHA SANTOSH KHANDAGALE	FYBSc	FS23008	8830720880	412	Paid
13	SAMDANIAEL E. NADAR	FYBSc IT	FIT23013	8667423936	413	Paid
14	RAJNANDINI DINKAR JAGTAP	FYBSc	FS23036	9511238558	414	Paid
15	KAYATHRI MURUGUN KONAR	FYBSc I T	FIT23010	8237785606	415	Paid

	TO A TAR DATE	EVDC- IT	FIT 23014	9321207077	416	Paid
5	VINAYAK ASHOK PRAJAPATI	FYBSc IT	F11 23014			
			FS23031	7498862139	417	Paid
1	PRANJALI MANOJ AHIRE	FYBSc	F525051			
				771650	418	Paid
	PARTITION A POTDAR	FYBSc-IT	FIT23028	7219571658	410	
3	ADITYA UPENDRA POTDAR	11200				
				9156865133	419	Paid
9	OMKAR VASANT HEMADE	SYBSc	SS23020	713000		
9	OWIKAK VIOLET				420	Paid
		SYBSc	SS23019	7397853088	420	
0	SANKET NIVRUTTI JADHAV	SIBSC				
				9588418337	421	Paid
	KOMAL MANOJ KAMBLE	SYBSc	SS23014	95001100		Paid
21			SS23016	8087172925	422	Taio
20	PRIYANKA ASHOK SHAH	SYBSc	3323010			2
22	PRITAME			9503211654	423	Paid
	TODA SINGH	TYBSc	TS23018	9503211054		
23	SAMIR BHUPENDRA SINGH				101	Paid
		TYBCOM	TC23054	8149347139	424	
	POOJA SUDHIR KUBAL	TABCOM		72		
24	POOJA BOZZ			7769876379	425	Paid
	AHIRE	TYBSc	TS23016	7705070		
25	TANMAY AKSHYA AHIRE				426	Paid
		TYBSc	TS23017	9763273983	420	
	ANKITKUMAR SHREECHAND	Tibse				Unpaid
26			SS23016	8010264059	427	(Cancelled)
	YADAV SIDDHI AZAD SHRIVASTAV	SYBSc	5523010		1	
27	SIDDHI AZAD SHIG VI			9890573556	428	Paid
		SYBSc	SS23013	989037322		
20	QAZI ARBEZA				429 Pai	Paid
28		FYBSc I T	FIT23043	7666889436	1	
	MAHALAXMI SHANKARAN	FYBSCII	1 2 11 12 63		100	Paid
29			SS23020	7499589536	430	
	CHETTIAR	SYBSc	5523020			2.1
30	YOGESH BALU RATHODE			8329032155	431	Paid
		FYBSc	FS 23035	8329032100		
The state of	POOJA BHIMRAO BAGUL	1120				

Total Registered students = 30

Total fees Collection= 30 X 300 = 9000 /-

Course Co-Ordinator :- Dr. D. M. Sapkal

Head- Department of Physics

Course Clerk: - Mr. Yogesh S. Suryawanshi
(Attendance Physics Laboratory)

#### S. I. C. E. Society's

#### Degree College of Arts, Science and Commerce Ambernath

Permanently Affiliated to University of Mumbai NAAC Accredited B<sup>+</sup> Academic Year 2023-24

#### ATTENDANCE SHEET

CERTIFICATE COURSE NAME: Solar Technology as Green Energy Solution (30 Hrs)

Sr.	Name of the Portisipants			Date & Time	1-12-1	
No.	Name of the Participants	CLASS Roll No		12/08/2023	19/08/2023	26/08/2023
		100		1.45pm	1.45 pm	1.45 pm
1.	ASHVINIBEN SAMADHAN PATIL	FYBSc	FS 23013	Dagil	Baril	peroil
2.	SAMIKSHA SHANTARAM BAGUL	FYBSc	FS 23020	Zagul_	Bagal	Rouf
3.	JANVI ANIL CHAVAN	FYBSc	FS23011	Ahavan.	Aharas	Thaver
4.	ELISHA PRAKASH AASADE	FYBSc	FS23004		CON-	
5.	KASHISH AFROZ AZMI	FYBSc	FS23007	1602mi	(com)	- Cazna
6.	DARSHANA VINOD MOKAL	FYBSc	FS23009	Dubkal	Arroical	Mrgal
7.	VEDANTI SHAILENDRA GAIKWAD	FYBSc	FS23029	#gailing	#gai kioas	Taiboo
8.	NARESH KANTIBHAI MALI	FYBSc	FS23001	6	6	(/
9.	AKSHDA BHAGVAN WALIMBE	FYBSc	FS23033			
10.	DASHARATH HARIBA CHLEKAR	FYBSc	FS23010	Telekar	Dekkur	Jekkor
11.	SUJIT RAVINDRA JADHAV	FYBSc	FS23025			
12.	DIKSHA SANTOSH KHANDAGALE	FYBSc	FS23008	Y handay al	Mandagal	Phandad
13.	SAMDANIAEL E. NADAR	FYBSc IT	FIT23013			
14.	RAJNANDINI DINKAR JAGTAP	FYBSc	FS23036	Religion	Daynardin'	Panond
15.	KAYATHRI MURUGUN KONAR	FYBScIT	FIT23010	Royathine	Agyothini	Mayathir
16.	VINAYAK ASHOK PRAJAPATI	FYBSc IT	FIT 23014	Price	Pier	Prise
17.	PRANJALI MANOJ AHIRE	FYBSc	FS23031	@MB_	PmB_	PMB_
18.	ADITYA UPENDRA POTDAR	FYBSc-IT	FIT23028		HIM	-
19.	OMKAR VASANT HEMADE	SYBSc	SS23020	Bumate	Phine	Rhimal

	The state of the s			0		7 11
20.	SANKET NIVRUTTI JADHAV	SYBSc	SS23019	Steller	Sour	1. Balack
21.	KOMAL MANOJ KAMBLE	SYBSc	SS23014	Komas	Karal	
22.	PRIYANKA ASHOK SHAH	SYBSc	SS23016	Pr. yanko	Priyanka	Minaw
23.	SAMIR BHUPENDRA SINGH	TYBSc	TS23018	many		
24.	POOJA SUDHIR KUBAL	TYBCOM	TC23054		ASA	100m
25.	TANMAY AKSHYA AHIRE	TYBSc	TS23016	ad	DY	101
26.	ANKITKUMAR SHREECHAND YADAV	TYBSc	TS23017	drkil.y	al delix	8 dkili
27.	SIDDHI AZAD SHRIVASTAV	SYBSc	SS23016	Siddhi		
28.	QAZI ARBEZA	SYBSc	SS23013	Ad	(A)	
29.	MAHALAXMI SHANKARAN CHETTIAR	FYBSc I T	FIT23043	A.		jot
30.	YOGESH BALU RATHODE RATHOD	SYBSc	SS230202	Year		P
31.						

Course Co-ordinator- Dr. D.M. SAPKAL

Date: 09/01/2024

To,

The Principal,

S.I.C.E.S. Degree College of Arts, Science & Commerce,

Ambarnath(W)

Sub.- Permission to Visit Contendre Solar panel Company sonale, Bhiwandi.

Respected Madam

The students enrolled in the certificate course in Physics (Solar Energy as Green Solution) would want to visit the Contendre Solar panel Manufacturing Company sonale, Bhiwandi on 13<sup>th</sup> January (Saturday) 2024 by Bus. Students will have the opportunity to learn about solar energy during this study tour.

Thanking you,

ATT SOLON

Dr. D. M. Sapkal
HEAD DEPARTMENT OF PHYSICS

SICES DEGREE COLLEGE OF ARTS, SCIENCE & COMMERCE Jambhul Phata, Ambernath (W)

Yours Sincerely



South Indian Children's Education Society's

#### **DEGREE COLLEGE OF ARTS, SCIENCE & COMMERCE**

AMBERNATH (W.)

Permanently Affiliated to University of Mumbai Accredited by NAAC with B\*Grade

#### CERTIFICATE

This is to co	ertify that (Mr./Ms.) Sujit Ravino	tra Sadhav of
F.Y.B.Sc.	· ·	
Solar Jec	chnology as Green Energy Solution	conducted by the Department of
Physics	on 13 <sup>th</sup> Jan 24 & obtained gradeX+	in the academic year 20232024

Course Coordinator

Principal



South Indian Children's Education Society's

#### **DEGREE COLLEGE OF ARTS, SCIENCE & COMMERCE**

AMBERNATH (W.)

Permanently Affiliated to University of Mumbai Accredited by NAAC with B<sup>+</sup>Grade

#### CERTIFICATE

This is to certify that (Mr. 1Ms.) Aditya. Pendso. Potdar of F.Y.B.Sc. 1T successfully completed the 2 credits (30 Hrs.) Certificate Course in Solar Sechnology as Green Energy Solution conducted by the Department of Physics on 13th Jan 24 & obtained grade 1 in the academic year 2023 2024

Course Coordinator



# S.I.C.E.S Degree College of arts science and commerce, Ambarnath(W)

#### Department of chemistry and physics

Industrial Visit Report Date: 15/01/2024

The study tour which was scheduled on 13/1/2024 with 55 students along with three Teachers Dr. Harshal M. Bachhav, Dr. Diganbar M. Sapkal, Asst. Prof. Varsha Sharma and one Non Teaching Staff Mr. Yogesh Suryawanshi accompanied the study visit. Everyone gathered in the college at 8:00 a.m. after attendance everyone got in the bus. The bus started its journey at 8:30 a.m. and reached our first destination Auctel private limited chemical company, Dombivali at 10:30 a.m. the company employees welcomed us with great enthusiasm.

After the breakfast we will guided with the rules and guidelines regarding safety precaution from hazards for entering the chemical company. Then we visited the chilling plant guided by Mr.Ishwar a company person there we got to know about Brine solution and how its is applied in air conditioners. Then we visited to ethoxylation plant where ethylene oxide is used as raw material they also showed us that how liquid nitrogen is stored in the tank. Then we visited the control room of the company from where all the valves of various plants are controlled. Next we visited to quality control lab where they should as how quality analysis is done of various chemicals using different instruments. About 2 o'clock we left to visit for second company.

The second place to visit was Contendre solar company, Sonale, Bhiwandi.

We reached at 3.00 pm at Contendre solar company after the hospitality by the company members we were divided into 3 groups. The company person Mr. Kunal sir explained the process of manufacturing of solar panels. We were taken to the manufacturing department of the solar panels where first we were shown how the solar cells are prepared then how they are stacked upon a glass sheet. On the glass sheet first they put a sheet of EVA that is ethyl vinyl acetyle than they put solar cells then there is another layer of EVA and then the back sheet this layer is checked in an x-ray machine if any of the cell is damaged it is replaced manually then whole sheet is laminated for 15 minutes. Then it is framed by aluminium and a junction box is

attached. At the end they put in x- ray to detect any fault after it will set for 4-8 hours for drying the glue and then they are packed and kept in store house.

At last we went on terrace to observe there solar project. Where both monocrystal and polycrystalline solar panels were used. After having this great experience of learning new things our study tour ends.

This study tour provided a fantastic opportunity for students to learn how to put their theoretical knowledge into practice and how to build a successful career in their chosen industries.

We came back to college at 7:00p.m. with sweet memories of tour and student departed to their home.

Dr. Harshal M. Bachhav Haashal.
 Dr. Digambar M. Sapkal
 Asst. Prof. Varsha Sharma









