

Programme Template

1. Name of the Programme and Code	Solar Systems and Management, ESX
2. Degree (UG/PG)	PG - Diploma
3. Minimum Duration of the Programme (Specify for FT and PT, if applicable)	FT - 2 semesters PT - 4 semesters
4. Maximum Duration of the Programme (Specify for FT and PT, if applicable)	FT - 4 semesters PT - 6 semesters
5. Capacity (Max. Student Strength) of the Programme	30 (Sponsored International Working Professionals)
6. Number of Regular Faculty Members Involved as Teaching Faculty in the Programme	25 (As of April 20, 2026)
7. Minimum Credit Requirements for the Degree	36
8. Articulate the Program Learning Outcomes (PLO)	
Abbreviation	Description
PLO1	Model and analyze energy systems to assess strategies for the efficient use, storage, and management of energy resources.
PLO2	Analyze the technical and economic feasibility of renewable energy systems, assess project viability, and evaluate the project development and financing approaches
PLO3	Design and operate renewable energy devices and integrated systems.

9. Map PLOs with Institute Learning Outcomes (ILOs) of the Degree			
[Indicate '1' for weak, '2' for good, and '3' for excellent relation. Leave the cell blank to indicate no relation]			
	PLO1	PLO2	PLO3
ILO1	3	2	2
ILO2	1	1	2
10. Number of Programme Core Credits		36	
11. Number of Programme Elective Credits		Nil	
12. Number of Open Credits		Nil	
13. Number of Project Core Credits		Nil	
14. Details of Creative Expression and Ethical Reasoning (CEER) Component in the Programme [Only for UG]			
Number of Credits Assigned			N/A
Courses Involved and Credits Accounted [e.g., If one module in AMLXXX with contact hours YY satisfies Z credits, then write AMLXXX (Z credits)]			N/A
15. Details of Emerging Trends (ETT) Component in the Programme [Only for UG]			
Number of Credits Assigned			N/A
Courses Involved and Credits Accounted [e.g., If one module in AMLXXX with contact hours YY satisfies Z credits, then write AMLXXX (Z credits)]			N/A
16. Details of Environment and Sustainability (E&S) Component in the Programme [Only for UG]			
Number of Credits Assigned			N/A
Courses Involved and Credits Accounted [e.g., If one module in AMLXXX with contact hours YY satisfies Z credits, then write AMLXXX (Z credits)]			N/A

17. Details of Research/Technical Communication Component in the Programme [Only for PG]

Number of Credits Assigned	1 credit
Courses Involved and Credits Accounted <i>[e.g., If one module in AMLXXX with contact hours YY satisfies Z credits, then write AMLXXX (Z credits)]</i>	During evaluation of following courses: 1. ESL9008 - Developing bankable solar energy power projects - Developer's perspective (0.5 credit) AND 2. ESL9009 - Developing bankable solar energy power projects - Lender's perspective (0.5 credit) through debating of the two perspectives for different solar power project case studies by the students. They will be divided into two teams of lender and developer.

18. Details of Professional Ethics Component in the Programme [Only for PG]

Number of Credits Assigned	0.5 credit
Courses Involved and Credits Accounted <i>[e.g., If one module in AMLXXX with contact hours YY satisfies Z credits, then write AMLXXX (Z credits)]</i>	1. ESL9001 - Introduction to Solar Energy: Motivation and Perspectives (0.5 credit)

19. Details of External Connect Component in the Programme [Only for PG]

Number of Credits Assigned	0.5 credit
Courses Involved and Credits Accounted [e.g., <i>If one module in AMLXXX with contact hours YY satisfies Z credits, then write AMLXXX (Z credits)</i>]	1. <i>ESL9010</i> - Testing and Certification (0.5 credit)

20. List of prescribed courses in all baskets (BS, GE, DC/PC, DE/PE, ...)

Basic Sciences (BS)	General Engineering (GE)	Departmental/Programme Core (DC/PC)	Departmental/Programme Elective (DE/PE)
NIL	NIL	ESL9001 - Introduction to Solar Energy: Motivation and Perspectives (1.5-0-1)	NIL
		ESL9002 - Solar Resource assessment, storage and utilization (1.5-1.5-4)	
		ESL9003 - Solar system Designing tools (0-0-6)	
		ESL9004 - Electrical Subsystem (1.5-1.5-4)	
		ESL9005 - Power Markets and Forecasting (2-0-2)	
		ESL9006 - Financial aspects of solar power projects (1-2-2)	
		ESL9007 - Policy and Regulatory Considerations (1-0-0)	
		ESL9008 - Developing bankable solar energy power projects - Developer's perspective (4-0-4)	
		ESL9009 - Developing bankable solar energy power projects - Lender's perspective (1-0-4)	
		ESL9010 - Testing and Certification (1.5-0.5-4)	

21. Nominal Semester-wise Academic Plan

SEMESTER	Courses (Number, abbreviated title, L-T-P, Credits)					Lecture Courses	Contact hours/week				Credits
							L	T	P	Total	
I	<i>ESL9001</i> - Introduction to Solar Energy: Motivation and Perspectives (1.5-0-1), 2	<i>ESL9002</i> - Solar Resource assessment, storage and utilization (1.5-1.5-4), 5	<i>ESL9003</i> - Solar system Designing tools (0-0-6), 3	<i>ESL9004</i> - Electrical Subsystem (1.5-1.5-4), 5	<i>ESL9005</i> - Power Markets and Forecasting (2-0-2), 3	4	6.5	3	17	26.5	18
II	<i>ESL9006</i> - Financial aspects of solar power projects (1-2-2), 4	<i>ESL9007</i> - Policy and Regulatory Considerations (1-0-0), 1	<i>ESL9008</i> - Developing bankable solar energy power projects – Developer's perspective (4-0-4), 6	<i>ESL9009</i> - Developing bankable solar energy power projects – Lender's perspective (1-0-4), 3	<i>ESL9010</i> - Testing and Certification (1.5-0.5-4), 4	5	8.5	2.5	14	25	18
Total											36
22. Average Contact Hours per Faculty <i>per Week</i> , for this Programme						3					
23. Average Credit Students per Faculty per Semester, for this Programme						18					

24. If the program is a revision of an existing program, please list the major changes made.	N/A
25. Please elaborate on,	
a) how flexibility for the students has increased?	New Course and is for specialized PG Diploma programmes. Hence not applicable.
b) how engagement and interaction with the student have increased?	The programme involves lab/tutorial components on all courses. Therefore, ample amount of interaction with students is expected.
c) how hands-on learning is emphasized in the program?	Credit distribution of all courses is more on the tutorial and practical components compared to theory component. Therefore, learning of course component will be through numerical design, computations and experimental hands-on exercises.