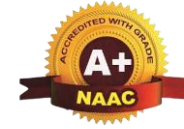


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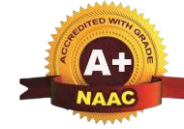
Lesson Plan & Work-done Diary for AY:2024-25, Even Semester

Course with Code: Smart Grid_21EE722				Faculty: Dr Sathish K R			Semester & Section: 7th Sem	
Class No.	Date planned (DD/MM M)	Topics to be covered	TLP Planned	Class No.	Date of Conduction (DD/MM)	Topics Covered	TLP Executed	Remarks if any deviation
MODULE-1								
1		Introduction to Smart Grids Today's Grid versus the Smart Grid	Chalk & Talk	1				
2		Energy Independence and Security Act of 2007: Rationale for the Smart Grid Computational Intelligence and Power System Enhancement	Chalk & Talk	2				
3		Communication and Standards in Smart Grids, Environment and Economics	Chalk & Talk	3				
4		Smart Grid Market Drivers, Stakeholder Roles, and Functions, Working Definition of the Smart Grid Based on Performance Measures	Chalk & Talk	4				
5		Representative Architecture and Functions of Smart Grid Components,	Chalk & Talk	5				
6		Smart Grid Communications and Measurement Technology, GIS and Google Mapping Tools in Smart Grids	Chalk & Talk	6				
7		Multiagent Systems (MAS) Technology in Smart Grids, Microgrid and Smart Grid Comparison	Chalk & Talk	7				
8		Introduction to Load Flow Studies, Congestion Management and Load Flow for Smart Grid Design, Static Security Assessment (SSA) and Contingency Studies	Chalk & Talk	8				



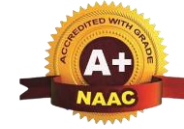
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Class No.	Date planned (DD/MM)	Topics to be covered	TLP Planned	ClassNo.	Date of Conduction (DD/MM)	Topics Covered	TLP Executed	Remarks if any deviation
MODULE-2								
9		Introduction to Stability in Power Systems, Strengths and Weaknesses of Existing Voltage Stability Analysis Tools	Chalk & Talk	9				
10		Introduction to Voltage Stability Assessment, Voltage Stability Assessment Techniques	ICT	10				
11		Voltage Stability Indexing	ICT	11				
12		Analysis Techniques for Steady State Voltage Stability Studies	ICT	12				
13		Application and Implementation Plan of Voltage Stability	Chalk & Talk	13				
14		Optimizing Stability Constraints through Preventive Control	Chalk & Talk	14				
15		Angle Stability Assessment	Chalk & Talk	15				
16		State Estimation in Power Systems	ICT	16				



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Class No.	Date planned (DD/MM M)	Topics to be covered	TLP Planned	Class No.	Date of Conduction (DD/MM)	Topics Covered	TLP Executed	Remarks if any deviation
MODULE-3								
17		Introduction to Computational Tools for Smart Grid Design, Decision Support Tools	Chalk & Talk	17				
18		Optimization Techniques in Smart Grids	ICT	18				
19		Heuristic and Evolutionary Optimization	Chalk & Talk	19				
20		Advanced Optimization Techniques	Chalk & Talk	20				
21		Hybridizing Optimization Techniques	Chalk & Talk	21				
22		Computational Challenges and Smart Grid Pathway Design	ICT	22				
23		Barriers, Solutions, and Automation in Smart Grids	Chalk & Talk	23				
24		End User Level Automation and Adaptive Control Applications	ICT	24				



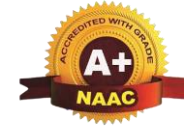
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Course with Code: Smart Grid_21EE722				Faculty: Dr. Sathish K R			Semester & Section: 7th Sem	
Class No.	Date planned (DD/MM)	Topics to be covered	TLP Planned	Class No.	Date of Conduction (DD/MM)	Topics Covered	TLP Executed	Remarks if any deviation
MODULE-4								
25		Renewable Energy Resources and Sustainable Energy Options	Chalk & Talk	25				
26		Penetration and Variability Issues	ICT	26				
27		Demand Response and Electric Vehicles	Chalk & Talk	27				
28		PHEV Technology and Environmental Implications	ICT	28				
29		Storage Technologies and Incentives	Chalk & Talk	29				
30		Interoperability and Standards	ICT	30				
31		Cyber Security in Smart Grids	ICT	31				
32		Advanced Cyber Security and Methodologies	Chalk & Talk	32				



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Course with Code: Smart Grid_21EE722				Faculty: Dr. Sathish K R			Semester & Section: 7th Sem	
Class No.	Date planned (DD/MM)	Topics to be covered	TLP Planned	Class No.	Date of Conduction (DD/MM)	Topics Covered	TLP Executed	Remarks if any deviation
MODULE-5								
33		Introduction to Research, Education, and Training for the Smart Grid	Chalk & Talk	33				
34		Multidisciplinary Research and Activities	Chalk & Talk	34				
35		Smart Grid Education and Training	Chalk & Talk	35				
36		Introduction to Case Studies and Test Beds	ICT	36				
37		Advanced Metering and Microgrids	Chalk & Talk	37				
38		Power System Unit Commitment and Network Reconfiguration	Chalk & Talk	38				
38		Renewable Energy Integration and Test Beds	ICT	38				
40		Challenges and Benefits of Smart Transmission	ICT	40				



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	Activity	Planned	Actual	Remarks
1	Theory Classes	40		
2	Assignments/ Quizzes/ Self-study	5		
3	Tutorials/ Extra classes	-		
4	Internal Assessments	3		
5	ICT based Teaching (% of usage in Curriculum)	30		
Planning			Execution	
Faculty Signature:			Faculty Signature:	
HoD Signature:			HoD Signature:	