JEE 696 Greenhouse Gas Measurement, Mitigation and Monitoring Technology (Semester 1/2024)

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Lecture #	Module	Topic	Expected outcome	Instructor
1	1. Basic understanding of state of knowledge and current development related to climate change and climate actions	1. State of Knowledge on Climate Change 2. Climate change policy, greenhouse gas emission and reduction targets (UNFCCC, IPCC, and related international agreements) 3. GHG Emissions: Sources, Sinks and Sectors, IPCC Guidelines for national GHG inventories	Understand the objectives and expected outcomes of the course, big picture of climate change and how the knowledge gained from the class fits into that big picture of climate change solution.	AC
2			Understand the mechanism and aims that the world communities are using to drive cooperations towards emission mitigation.	AC
3	2. Energy sector	Energy sector: Basic data needs	Understand and able to apply the methodology to measure and estimate greenhouse gas emissions from sources in energy sector.	AP
4		Energy sector: emission estimate		AP
5		Energy sector: Mitigation-baseline, measures, and impacts		AP
6	3. IPPU and waste sector	Waste sector: Basics and emission estimate	Understand and able to apply the methodology to measure and estimate greenhouse gas emissions from sources in IPPU and waste sector.	KW
		Waste sector: Mitigation measures and impacts		KW
7		Industrial process sector: Basics and emission estimate		AC/Invited
8	4. AFOLU sector	AFOLU sector: Basics and emission estimate	Identify key sources and how to estimate greenhouse emissions from AFOLU sector.	AC
9		AFOLU sector: Basics and emission estimate		
10		AFOLU sector: Basics and emission estimate		
11		AFOLU: Mitigation measures and its impacts		
12		AFOLU: Mitigation measures and its impacts		
13	5. Market and mechanisms	Carbon neutrality, net zero emission concepts	Applied the knowledge to estimate carbon credit, estimate the baseline and mitigation impacts	
14		Carbon footprint: Scope and estimate		
15		Carbon credit: Concept and implications		